

INDEX

BUSINESS WEEK

A McGRAW-HILL PUBLICATION

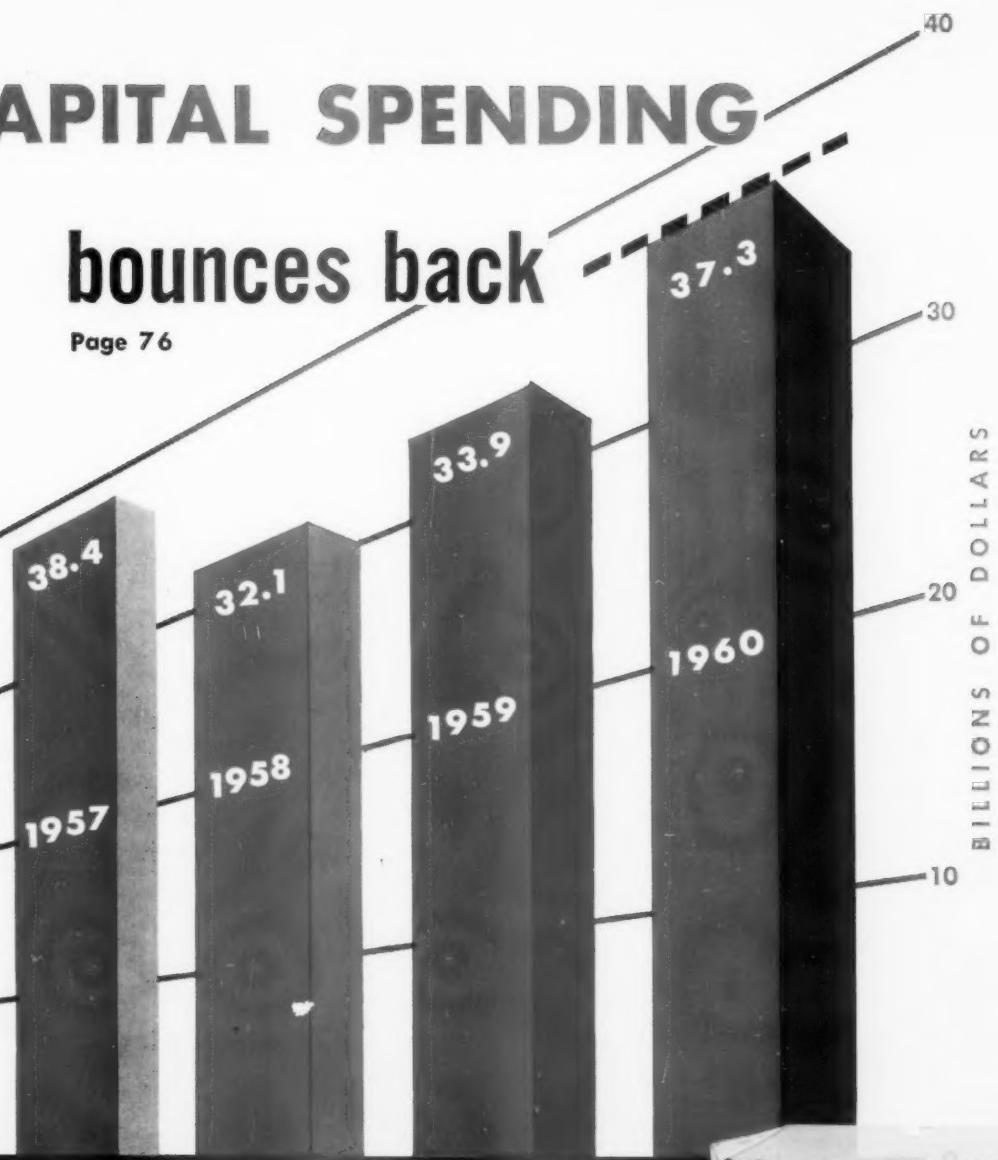
FIFTY CENTS

NOV. 14, 1959

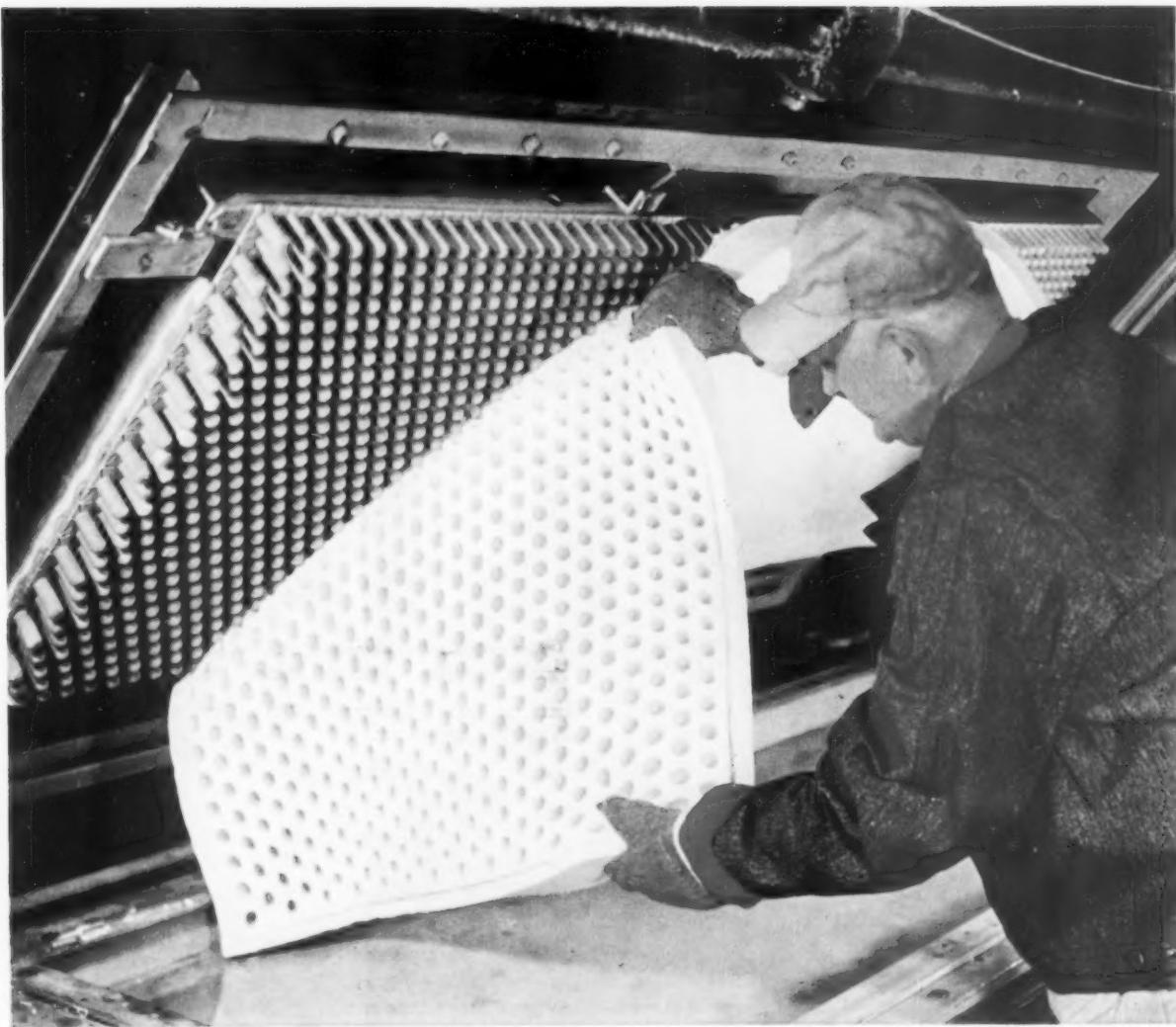
CAPITAL SPENDING

bounces back

Page 76



STEVE'S RICE GS E
UNIVERSITY MICROFILMS S 7
313 N 1ST ST C 6
ANN ARBOR MICH
9-10



"5352"—New Cushion Against Rising Costs

All-synthetic foam rubber is here—made from a new synthetic rubber latex by Goodyear. Its name: PLIOLITE LATEX 5352. Already interested: the automotive industry, furniture companies, shoe manufacturers—even firms that have never used foam before!

Why all this interest? PLIOLITE LATEX 5352 is of such high quality that it can be used alone, does not require blending with natural latex to produce an outstanding foam. *Result: foam rubber cushioning made from Goodyear's new PLIOLITE LATEX 5352 will be substan-*

tially lower in cost than any foam ever used in commercial products before.

Another key point: because this new Goodyear latex is man-made, its fine quality will not fluctuate.

If your products can profit from a low-cost foam with excellent compression characteristics, good resilience, remarkable stress resistance and great durability—it will pay you to investigate PLIOLITE LATEX 5352. Write for details to: Goodyear, Chemical Division, Dept. K-9415, Akron 16, Ohio.



GOOD YEAR

CHEMICAL DIVISION

Pliolite—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

IN BUSINESS this WEEK November 14, 1959

GENERAL BUSINESS

	Page
BUSINESS OUTLOOK	19
WASHINGTON OUTLOOK	41
INTERNATIONAL OUTLOOK	143
PERSONAL BUSINESS	165
THE TREND	184
FIGURES OF THE WEEK	2
READERS REPORT	5

STEEL GETS OFF TO RUNNING START. Thanks to a swift startup, close-to-capacity operations may be as much as two weeks ahead of predictions....

25

MONESSEN GOES BACK INTO BUSINESS. How a typical mill gets rolling.

26

PLANT LAYOFFS WILL INCREASE. For hundreds of steel users the worst is yet to come, with work weeks trimmed back from five or six days to four....

30

THE COST OF THE STEEL STRIKE: \$5-BILLION, BY ONE COUNT..

31

SEARCH IS ON FOR A NEW APPROACH TO TAXATION. House Ways & Means Committee is taking a comprehensive look.....

32

ROCKEFELLER calls for growth.....

33

GROGGY TV AWAITS NEW BLOWS. Hearings on fixed quiz shows are producing a wide shakeup of the industry.....

34

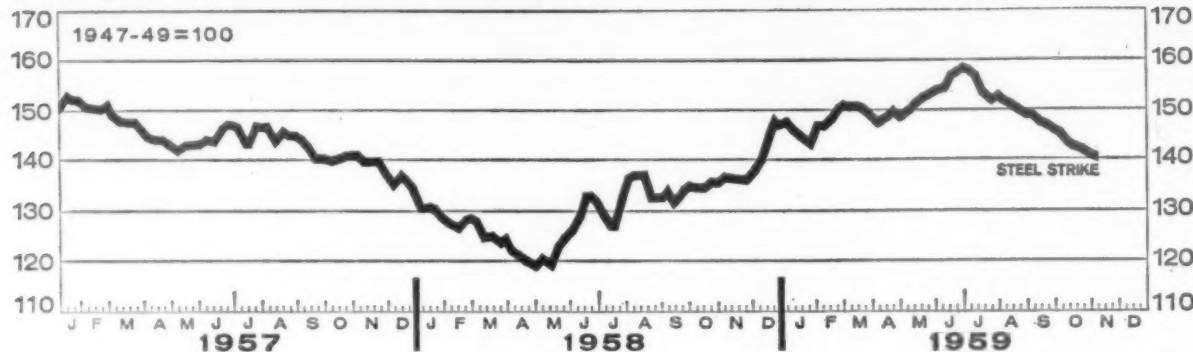
IN BUSINESS. Pentagon weighs underground ICBM launching, lefthanded subsidy for commuter railroads, blow to Canadian uranium, Mr. Reynolds' airline...

38

THE DEPARTMENTS

BUSINESS ABROAD:	Castro Plays From Desperation. Peasants still are loyal, other groups waver.....	45
	Middle East Tunes in on TV.....	48
	In Business Abroad: U. S.-Polish trade talks, French and Indian chemical industry moves, Japanese radio in Ireland, Chinese aviation, Dutch business complaints.....	54
COMMODITIES:	Bracing for a Market Push. Aluminum producers must look elsewhere for sales now that government buying for the strategic stockpile has ended.....	169
COMPANIES:	Big Steel Picks a New Boss. Pres. Worthington must cope with tough issues raised by deadlocked 1959 union negotiations.....	156
ECONOMICS:	New Jobs for Company Men. Business Economists meet.....	128
FINANCE:	Radio Network Pulls Out of Jam.....	59
	Worrisome Windfall for Steel. Strike's inventory depletion, by odd accounting twist, means bookkeeping profits—and tax bite—especially for warehousers....	65
	In Finance. Crowell-Collier buys Macmillan stock, banking group seeks to invalidate New Haven deal, IMF sells gold to U. S., Lehman Bros. dropped from antitrust suit.	75
GOVERNMENT:	Pinning Inflation on Steel. Study for Congress draws fire from both sides.....	147
	Russia Faces Growth Dilemma. Its economy is running faster than ours now, but Congressional committee says it will soon face problems like ours of 50 years ago	148
INDUSTRIES:	Capital Spending Heads Back Toward Its Peak. McGraw-Hill survey shows business spending for new plant and equipment will jump 10% next year.....	76
	How to Stay Alive in Electronics.....	83
LABOR:	Peace Far Off As Mills Reopen—But Fear of Congress Is a Spur though steel union and companies still talk tough.....	150
	Reuther Stays, Adds to Power. He keeps IUD in the labor federation but gives it more scope, says top leadership is "flabby".....	153
	In Labor. NLRB reorganization, man-day losses, elections, labor "bill of rights," mine agreement	155
MANAGEMENT:	In Management. New president at Johns-Manville, office automation, reorganization at Massey-Ferguson.....	175
	The Management Pattern. The World and the Spirit.....	176
MARKETING:	In Marketing. British TV bid for U. S. ads, FTC task force, Supreme Court ruling in Carter case, cosmetic company's expansion move.....	107
	New-Fangled Routes Deliver the Goods—Faster and Cheaper.....	108
THE MARKETS:	In the Markets. Short-lived stock rally, success of Treasury exchange offer, commodity prices, Ford stock, Sonnabend's purchase of Alleghany stock.....	160
NEW PRODUCTS:	It's Biggest Year Ever for Changes in Trucks.....	178
	More Computer for Less Money.....	180
RESEARCH:	The Thrust to Conquer Space. If Congress provides the money, the U. S. can have a rocket engine with 1.5-million-lb. thrust in about three years.....	116
	In Research. Dangers in antibiotics, Esso's "Technical U. N.," new crucible.....	126

FIGURES of the WEEK



BUSINESS WEEK INDEX (chart) 1953-55 Average 133.3 Year Ago 137.0 Month Ago 144.0 Week Ago 141.6 r Latest Week 141.0*

PRODUCTION

Steel ingot (thous. of tons)	2,032	2,011	368	368r	↑↑
Automobiles	125,553	125,279	118,793	101,616r	65,369
Engineering const. awards (Eng. News-Rec. 4-wk. daily av. in thous.)	\$52,412	\$48,702	\$55,204	\$47,639	\$55,466
Electric power (millions of kilowatt-hours)	10,819	12,311	13,086	12,978	13,019
Crude oil and condensate (daily av., thous. of bbl.)	6,536	7,003	6,809	6,887	↑↑
Bituminous coal (daily av., thous. of tons)	1,455	1,423	1,267	1,350r	1,344
Paperboard (tons)	247,488	311,196	331,221	332,303	319,477

TRADE

Carloadings: mfrs., miscellaneous and l.c.l. (daily av., thous. of cars)	70	64	59	60	58
Carloadings: all others (daily av., thous. of cars)	47	49	36	41	40
Department store sales index (1947-49 = 100, not seasonally adjusted)	121	136	143	150r	145
Business failures (Dun & Bradstreet, number)	198	331	274	273	265

PRICES

Industrial raw materials, daily index (BLS, 1947-49 = 100)	89.2	91.0	93.5	96.0	95.0
Foodstuffs, daily index (BLS, 1947-49 = 100)	90.5	83.6	75.2	74.9	74.8
Print cloth (spot and nearby, yd.)	19.8¢	17.7¢	19.7¢	20.8¢	21.1¢
Finished steel, index (BLS, 1947-49 = 100)	143.9	186.8	186.8	186.8	186.8
Scrap steel composite (Iron Age, ton)	\$36.10	\$42.33	\$44.50	\$46.17	\$46.17
Copper (electrolytic, delivered price, E & MJ, lb.)	32.394¢	29.106¢	32.600¢	33.275¢	34.738¢
Aluminum, primary pig (U. S. del., E&MJ, lb.)	20.6¢	24.7¢	24.7¢	24.7¢	24.7¢
Aluminum, secondary alloy #380, 1% zinc (U. S. del., E&MJ, lb.)	‡	21.77¢	23.76¢	23.79¢	23.77¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$2.34	\$1.98	\$2.04	\$2.07	\$2.05
Cotton, daily price (middling, 1 in., 14 designated markets, lb.)	34.57¢	34.76¢	31.68¢	31.59¢	31.59¢
Wool tops (Boston, lb.)	\$1.96	\$1.66	\$1.87	\$1.83	\$1.85

FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 100)	31.64	52.66	57.00	57.40	57.48
Medium grade corporate bond yield (Baa issues, Moody's)	3.59%	4.88%	5.28%	5.27%	5.27%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate)	2-2½ %	3⅓ %	4¾ %	4¾ %	4¾ %

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks	‡	60,749	60,051	61,239	‡
Total loans and investments, reporting member banks	‡	101,900	103,026	103,388	‡
Commercial, industrial, and agricultural loans, reporting member banks	‡	31,520	30,445	30,452	‡
U. S. gov't guaranteed obligations held, reporting member banks	‡	34,260	27,665	28,194	‡
Total federal reserve credit outstanding	26,424	26,694	28,623	28,353	28,443

MONTHLY FIGURES OF THE WEEK

	1953-55 Average	Year Ago	Month Ago	Latest Month
Employment (in millions)	Oct.	62.2	65.3	66.3
Unemployment (in millions)	Oct.	2.5	3.8	3.2
Average weekly earnings in manufacturing	Oct.	\$73.36	\$85.17	\$89.47
Wholesale prices (U. S. Dept. of Labor BLS, 1947-49 = 100)	Oct.	110.4	119.0	119.7
Retail sales (seasonally adjusted, in billions)	Sept.	\$14.5	\$16.6	\$18.1

* Preliminary, week ended November 7, 1959.
† Revised.

‡ Not available.
§ Date for 'Latest Week' on each series on request.

THE PICTURES—Cover—Mario de Vincentis; 26, 27, 28, 29—Clyde Hare; 32—(lt.) UPI, (cen.) Ed Nano, (rt.) Herb Kratovil; 33—WW; 34—(lt.) UPI, (rt.) WW; 45—WW; 48, 49—McGraw-Hill World News; 59—(top) Herb Kratovil, (bot) Broadcasting Magazine; 83—Chic Donchin; 106, 109—Ed Malsberg; 128, 129, 134, 140—Grant Compton; 150—(lt.) UPI, (rt.) Clyde Hare; 151—(lt.) Clyde Hare, (rt.) WW; 156—U. S. Steel Corp.; 158—WW; 175—Johns-Manville Corp.; 178—(top) Diamond T Division of White Motor Co., (bot. two) General Motors; 179—(top) Diamond T Division of White Motor Co., (bot. lt.) General Motors, (bot. rt.) Studebaker; 180—Royal McBee Corp.

BELL SYSTEM TEAMWORK IS A VITAL FACTOR IN EFFICIENT, ECONOMICAL TELEPHONE SERVICE

**Direct Distance Dialing is an example of the
value of unified research, manufacture and operations**

There are great advantages to the public and the nation in the way the Bell System is set up to provide telephone service. It is a very simple form of organization, with four essential parts.

Bell Telephone Laboratories does the research.

The Western Electric Company is the Bell System unit which does manufacturing, handles supply, and installs central office equipment.

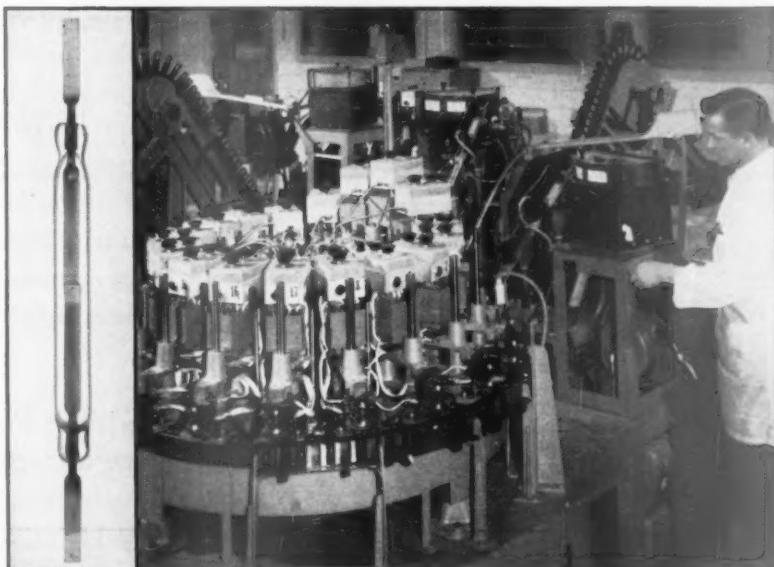
Twenty-one Bell Telephone operating companies provide service within their respective territories.

The American Telephone and Telegraph Company co-ordinates the whole enterprise and furnishes nationwide service over Long Distance lines.

Each is experienced and efficient in its own field. But the particular value of each is greatly extended because all four parts are in one organization and work together as a team.

Direct Distance Dialing—one of the greatest advances in the speed and convenience of telephone service—is an example of the value of this unified setup.

Already more than 8,000,000 telephone customers in more than 700 localities can dial direct to as many as 46,000,000 telephones throughout the country. Each month there are



EXAMPLE OF TEAMWORK. At left is new fast-moving switch (actual size) used in Direct Distance Dialing. Many of them go into action automatically every time you dial. Enclosed in gas-filled glass tubes to assure perfect contacts. Made to last 40 years. The result of Bell Telephone Laboratories and Western Electric working together to get the best and most economical design. At right is remarkable new machine, designed by Western Electric, which automatically assembles 360 switches an hour at a very small cost.

more. Millions of others can dial direct over shorter out-of-town distances. Calls as far as 3000 miles away go through in seconds.

All of this didn't just happen. It called for years of intensive planning, the invention of wholly new machines and equipment, and the development of new operating and accounting techniques.

Research alone couldn't have done it. Neither manufacturing nor operations separately could have

done it. And just money couldn't have done it, although it takes money and a lot of it for telephone improvement.

The simple truth is that it could never have been done so quickly and so economically without the unified setup of the Bell System.

For many a year it has given dynamic drive and direction to the business and provided the most and the best telephone service in the world.

BELL TELEPHONE SYSTEM



No Amateurs Allowed

Power is a deadly serious business. Industry rides squarely on its shoulders. And it takes "pros"—power specialists—to keep it alive and humming.

The Hartford Steam Boiler Inspection and Insurance Company has specialized in power since 1866. Today it is the acknowledged world leader in the highly technical business of insuring and safeguarding power equipment. Its more than 600 trained and experienced field inspectors, its professional engineering staff, its special agents and claims people—all have but one purpose: to protect you against loss from accident to your boilers, pressure vessels, turbines, engines, electrical and refrigerating equipment.

This specialized engineering talent, teamed with an equally competent insurance underwriting staff, is the reason why Hartford Steam Boiler writes more boiler and machinery insurance than any other company. Wouldn't it make good sense for your company to get the benefit of an organization so completely qualified in its one chosen field?

THE HARTFORD STEAM BOILER
INSPECTION
AND INSURANCE COMPANY
Hartford 2, Connecticut



"Inspection is our middle name"

Pub
OFF
add
42n
Good
Bona
of A
solic
INDI
rate
requi
Pate

SU
Wi
cha
Off
ad

PO

BUSI

BUSINESS WEEK

EDITOR & PUBLISHER Elliott V. Bell
MANAGING EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn

ASSOCIATE MANAGING EDITORS John L. Cobbs, Peter French, Eugene Miller

SENIOR EDITORS

Clark R. Pace, Howard Whidden, M. J. Rossant, Leonard Silk, Richard L. Waddell

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor*; Sam I. Nakagawa

Economics: Leonard Silk, *Editor*

Finance: M. J. Rossant, *Editor*; Irwin Lainoff, H. Erich Heinemann, Charles Brophy

Foreign: Howard Whidden, *Editor*; Paul Finney, Richard C. Halloran

Industrial Production: Theodore B. Merrill, Jr., *Editor*; C. Peter Buckley, Anthony Astrachan

Labor: Edward T. Townsend, *Editor*; Thomas R. Brooks

Management: Lois Stewart

Marketing: Richard L. Waddell, *Editor*; Cora Carter, George B. Finnegan

Personal Business: Joseph L. Wiltsee, *Editor*; Nathalie E. Lampman

Regions: Werner Renberg, *Editor*

Research: Jane H. Cutaya, *Editor*

Copy Editors: T. B. Crane (*Senior Copy Editor*), Jeanne A. Bernhardt, Robert F. Deed, John A. Dierdorff, Lawrence H. Odell, Doris I. White

Staff Writers: John H. Maughan, Christopher Elias, Herbert Klein

Statistician: Resa A. Warshaw

Editorial Production: Jean Drummond, George Heroux, John Hudor, Kenneth K. Kost,

Kathleen Kundel, Robert F. Murphy

Illustration: Richard A. Wolters, *Editor*; Robert Isear, *Pictures*; Frank Ronan, *Graphics*; Grant Compton, Mario De Vincentis, Jack H. Fuller, Herbert F. Kratovil, Jomary Mosley, Arthur Richter, Joan Sylow

Library: Jane G. Racza, *Librarian*; Tessie Mantzoros

Assistant to the Editor & Publisher: Gerald W. Schroder

U.S. & CANADIAN NEWS SERVICE

Atlanta Bureau: Jack E. Patterson, *Manager*; Frances Ridgway

Boston Bureau: Brenton Welling, Jr., *Manager*; Lucie Adam

Chicago Bureau: Merlin H. Mickel, *Manager*; Franklin N. Karmatz

Cleveland Bureau: John K. Fockler, *Manager*

Detroit Bureau: William Kroger, *Manager*; Michael Davis

Houston Bureau: Normand DuBeau, *Manager*; John Whitmore III

Los Angeles Bureau: Thomas M. Self, *Manager*; James P. Roscow, M. Yvonne Seadin

Milwaukee Bureau: Keith G. Felcyn, *Manager*

Philadelphia Bureau: W. B. Whichard, Jr., *Manager*; Eileen P. Schneider; Daniel B. Moskowitz

Pittsburgh Bureau: Richard N. Larkin, *Manager*; George W. New, Mary K. McCaffery

San Francisco Bureau: Richard Lamb, *Manager*; Margaret J. Scandling

Toronto Bureau: John D. Harbron, *Manager*; Jean Ross-Skinner

Washington Bureau: George B. Bryant, Jr., *Manager*; Alan E. Adams, Glen Bayless, Roy Calvin, Ernest Conine, Anthony DeLeonardis, John C. I. Donaldson, Jay Flocken, Boyd France, Donald O. Loomis, Gladys Montgomery, Arthur L. Moore, Burkely Musselman, Seth Payne, Dean Reed, Morton A. Reichek, Caroline Robertson, Vincent Smith.

MCGRAW-HILL ECONOMICS STAFF

Dexter M. Keezer, *Director*; William H. Chartener, Douglas Greenwald, Alfred Litwak, Margaret K. Matulis, Robert P. Ulin

MCGRAW-HILL NEWS SERVICE

Manager: John Wilhelm; **Beirut:** O. M. Marashian; **Bonn:** Morrie Helitzer, Silke Brueckler; **Caracas:** John Pearson; **London:** John Shinn, John Tunstall, Derek Barlow; **Mexico City:** Peter Weaver; **Moscow:** Robert Gibson; **Paris:** Robert E. Farrell, Helen Avati; **Tokyo:** Sol Sanders, John Yamaguchi, Toshiko Matsumura; **Atlanta:** B. E. Barnes; **Chicago:** Stewart W. Ramsey; **Cleveland:** Violet Forsha; **Dallas:** Mary Lorraine Smith; **Detroit:** Donald MacDonald; **Los Angeles:** Kemp Anderson, Jr., John Kearney, Michael J. Murphy; **San Francisco:** Jenness Keene; **Seattle:** Ray Bloomberg.

ASSOCIATE PUBLISHER Bayard E. Sawyer

ADVERTISING DIRECTOR John M. Holden

BUSINESS MANAGER Richard E. McGraw



BUSINESS WEEK • NOVEMBER 14, 1959 • NUMBER 1575

Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948). Founder. PUBLICATION OFFICE: 330 West 42nd Street, N. Y. 36, N. Y. See panel below for directions regarding subscriptions or change of address. EXECUTIVE, EDITORIAL, CIRCULATION and ADVERTISING OFFICES: McGraw-Hill Building, 330 West 42nd Street, N. Y. 36, N. Y. Donald C. McGraw, President; Joseph A. Gerardi, Executive Vice President; L. Keith Goodrich, Vice President and Treasurer; John J. Cooke, Secretary. Officers of the Publications Division: Nelson L. Bond, President; John R. Callahan, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising Sales; A. R. Venezian, Vice President and Circulation Coordinator. Subscriptions to Business Week are solicited only from management men in business and industry. POSITION AND COMPANY CONNECTION MUST BE INDICATED ON SUBSCRIPTION ORDERS. SEND TO ADDRESS SHOWN IN BOX BELOW. United States subscription rates for individuals in the field of the publication, \$6 per year, single copies 50¢. Canadian and foreign rates on request. Second class postage paid at N. Y. 1, N. Y. and at Albany, N. Y. Printed in U. S. A. Title registered in U. S. Patent Office. © Copyright 1959 by McGraw-Hill Publishing Co., Inc. All rights reserved.

SUBSCRIBERS: Send subscription correspondence and change of address to Fulfillment Manager, BUSINESS WEEK, 330 W. 42nd Street, N. Y. 36, N. Y. Subscribers should notify Fulfillment Manager promptly of any change of address, giving old address as well as new address, and including postal zone number, if any (official Post Office request). If possible, enclose an address label from a recent issue of the magazine. Since copies are addressed one to two issues in advance, please allow one month for change of address to become effective.

POSTMASTER . . . Please send form 3579 to Business Week, 330 W. 42nd Street, N. Y. 36, N. Y.

BUSINESS WEEK • Nov. 14, 1959

READERS REPORT

Why Penalize Them?

Dear Sir:

Reader Santo J. Pullara's letter as printed in the Readers Report [BW—Oct. 24 '59, p5] comments on a BW editorial on the du Pont-GM case and states that a point was overlooked in not asking: "How innocent are those stockholders?"

He goes on to imply he believes in some way they deserve a penalty.

It appears that perhaps it is Pullara who has missed the point. . . . the courts found the corporations involved innocent of any wrong-doing, thus the stockholders of the corporation must be similarly innocent. The courts also decided the situation involved the opportunity for wrongdoing and ordered that opportunity removed.

Does he believe the stockholder should be penalized because his corporation did not take advantage of this opportunity? We can assume a university instructor is too intelligent to believe stockholders should be penalized just because they are "capitalists."

ROBERT A. HAMMOND
MUSKEGON, MICH.

Steel War

Dear Sir:

Your thorough coverage of the steel impasse [BW—Oct. 24 '59, p25] reveals how closely it resembles war. Neither side can hope to gain from any strike—everyone loses, except competitors—in this case unstruck and foreign mills.

Strikes and wars occur because each side fancies itself stronger than the other and says so in such arrogant terms that only battle can avoid the brand of cowardice. When this happens between individuals legal procedures usually suffice to prevent mayhem or punish it.

If we hope to extend such legality to an international plane, it behoves us to show our critics and detractors that labor's internecine strife with management can be solved within a free economy, and short of widespread injury to innocent bystanders.

P. S. BARROWS
DEL MAR, CALIF.

Correspondent Banking

Dear Sir:

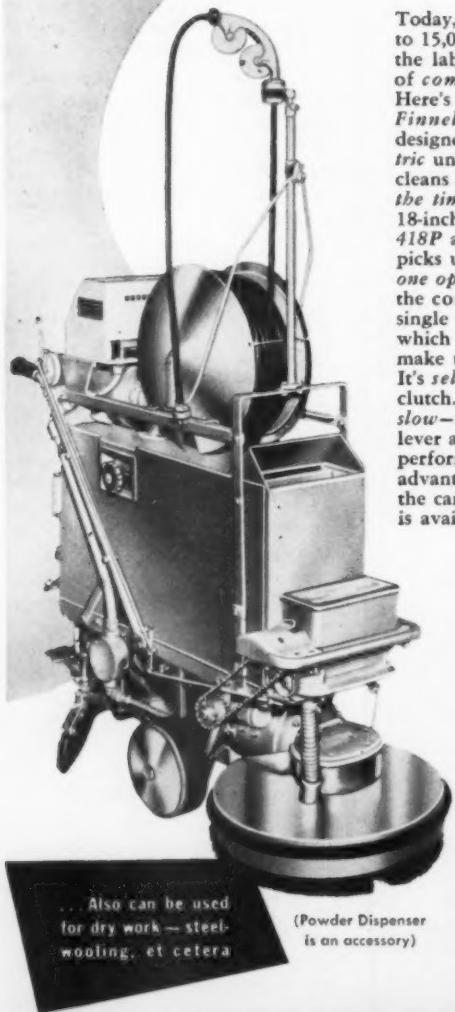
May I note a couple of minor errors in your fine article on correspondent banking [BW—Oct. 24

SMALL-AREA BUILDINGS...

Save $\frac{2}{3}$ of Every Hour of Scrubbing Time

WITH A

COMBINATION SCRUBBER-VAC!



Today, even buildings with but 2,000 to 15,000 sq. ft. of floor space can reap the labor-saving, cost-reducing benefits of combination-machine-scrubbing. Here's a Combination Scrubber-Vac, Finnell's 418P at left, that's specially designed for such buildings. This electric unit, with its 18-inch brush spread, cleans floors in approximately one-third the time required with a conventional 18-inch machine and separate vac. The 418P applies the cleanser, scrubs, and picks up (damp-dries the floor)—all in one operation! Maintenance men like the convenience of working with this single unit...the thoroughness with which it cleans...and the features that make the machine simple to operate. It's self-propelled, and has a positive clutch. No switches to set for fast or slow—slight pressure of hand on clutch lever adjusts speed to desired rate. Vac performs quietly. The 418P also serves advantageously in larger buildings for the care of floors in narrow aisles, and is available on lease or purchase plan.

Finnell makes Scrubber-Vac Machines for small, vast, and intermediate operations, and in battery, gasoline, and propane as well as electric models. From this complete line, you can choose the size and model that's exactly right for your job. It's also good to know that a Finnell Floor Specialist and Engineer is nearby to help train your maintenance operators in the proper use of the machine. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3811 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.
Originators of
Power Scrubbing and Polishing Machines



BRANCHES
IN ALL
PRINCIPAL
CITIES

'59,p46)? Before 1913 national banks were not required to hold reserves in New York City: A country bank could hold them in a reserve city bank and the latter in a central reserve city bank. . . .

Country banks use other commercial banks in large cities to collect their checks, you explain, because they "get faster, more reliable service." Like large commercial banks, the Federal Reserve Banks maintain round-the-clock—and reliable—check-handling departments. On speed, the honors are actually split: A country bank does better to send the checks drawn on New York City banks to a commercial bank in that city if only because some of the checks will be drawn on the large bank. But the country bank would do better to send checks drawn on banks in Albany or Syracuse or other cities in the New York Federal Reserve District to the Reserve Bank because the large commercial bank will send them to the Fed to collect, anyway, and the checks therefore have to be handled twice. Some country banks probably prefer not to send their checks directly to the Fed because they would have to do some pre-sorting of the items.

THOMAS O. WAAGE
ASST. VICE-PRES.
FEDERAL RESERVE BANK OF
NEW YORK
NEW YORK, N. Y.

Giving Formula

Dear Sir:

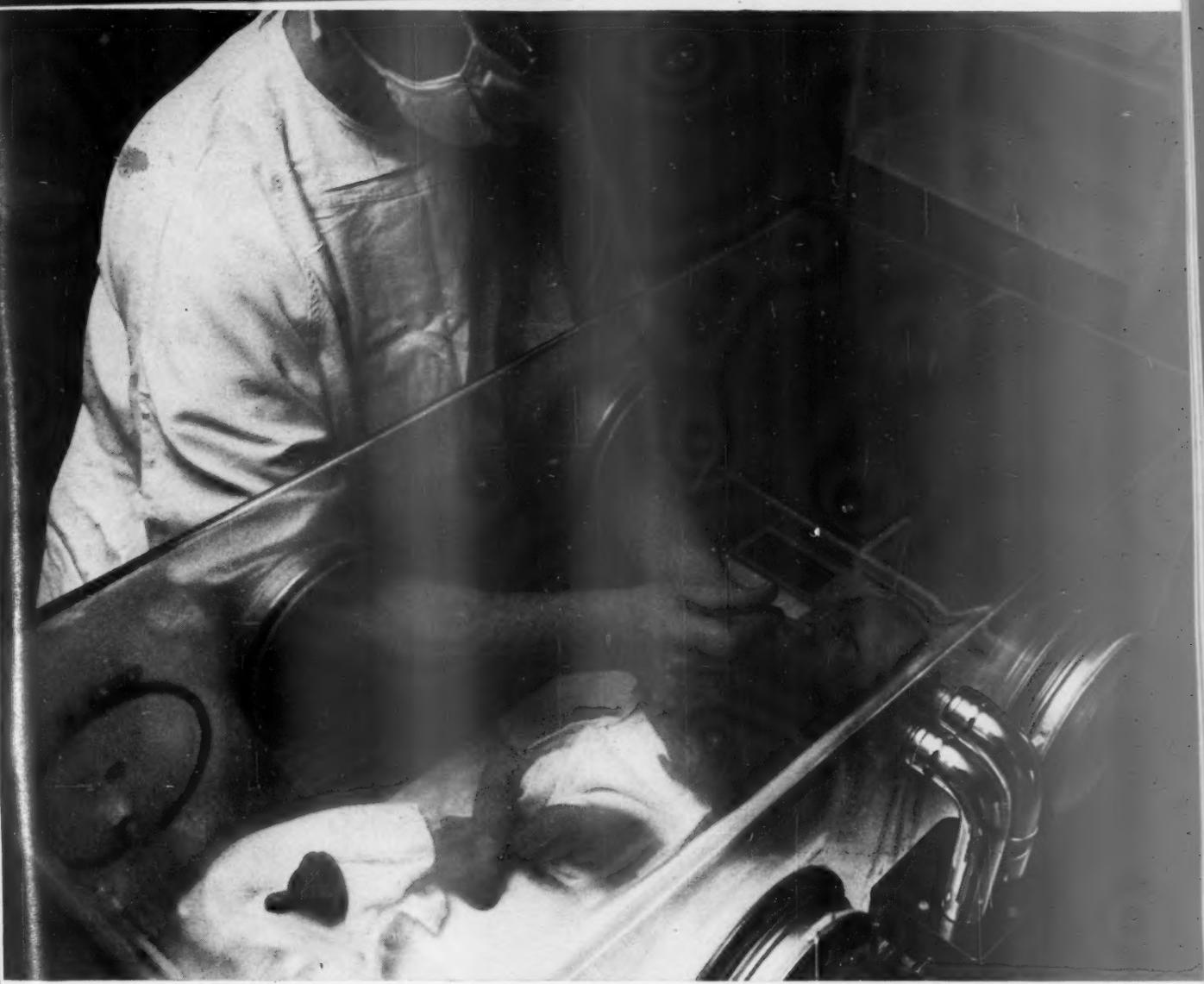
How to Gauge Company Gifts. Clevite Corp. Devises a Formula. [BW—Oct. 24 '59, p89].

"Since the company wanted its gifts to qualify as 'above average', it said it would generally give to a campaign 4% of what it figured the other 20 companies together would give." Very commendable but supposing the other 20 companies did not give anything.

May I suggest that companies base their giving on Malachi chapter 3, verse 10; "Bring ye all the tithes into the storehouse, that there may be meat in mine house, and prove me now herewith, saith the Lord of hosts, if I will not open you the windows of heaven, and pour you out a blessing, that there shall not be room enough to receive it."

Those who have tried it, like the latter formula best.

W. K. ADDLEMAN
BARROWS-ADDELMAN CO.
MONMOUTH, ILL.



A compressed air jet, shown at lower right (above) of this hospital incubator, provides moisture-saturated air to help infants breathe. Note vapor mist.

New safeguard for the newborn: oil-free air

Giving the newborn the best possible start in life is a vital problem in any hospital nursery. To safeguard such tiny patients, medical and physical science today muster every possible resource.

A large Midwestern hospital has found one such resource in compressed air—nebulized with water vapor to help infants breathe more easily by clearing their lungs of harmful mucus. This hospital provides such care for all premature and Caesarean babies, as well as for full-term babies having mucus or shallow-breathing conditions.

The compressed air used for this

purpose must be pure and entirely free from oil vapor, often carried off from the lubricant in most air compressors. The answer was found in a Gardner-Denver CACB carbon piston compressor, which uses no oil at all in the cylinder or crankcase and which has pistons and piston rings made of self-lubricating carbon.

As science and invention find new uses for compressed air, Gardner-Denver, now celebrating its hundredth year, is proud of its ability to provide air compressors and air tools for every requirement. Gardner-Denver Company, Quincy, Illinois.



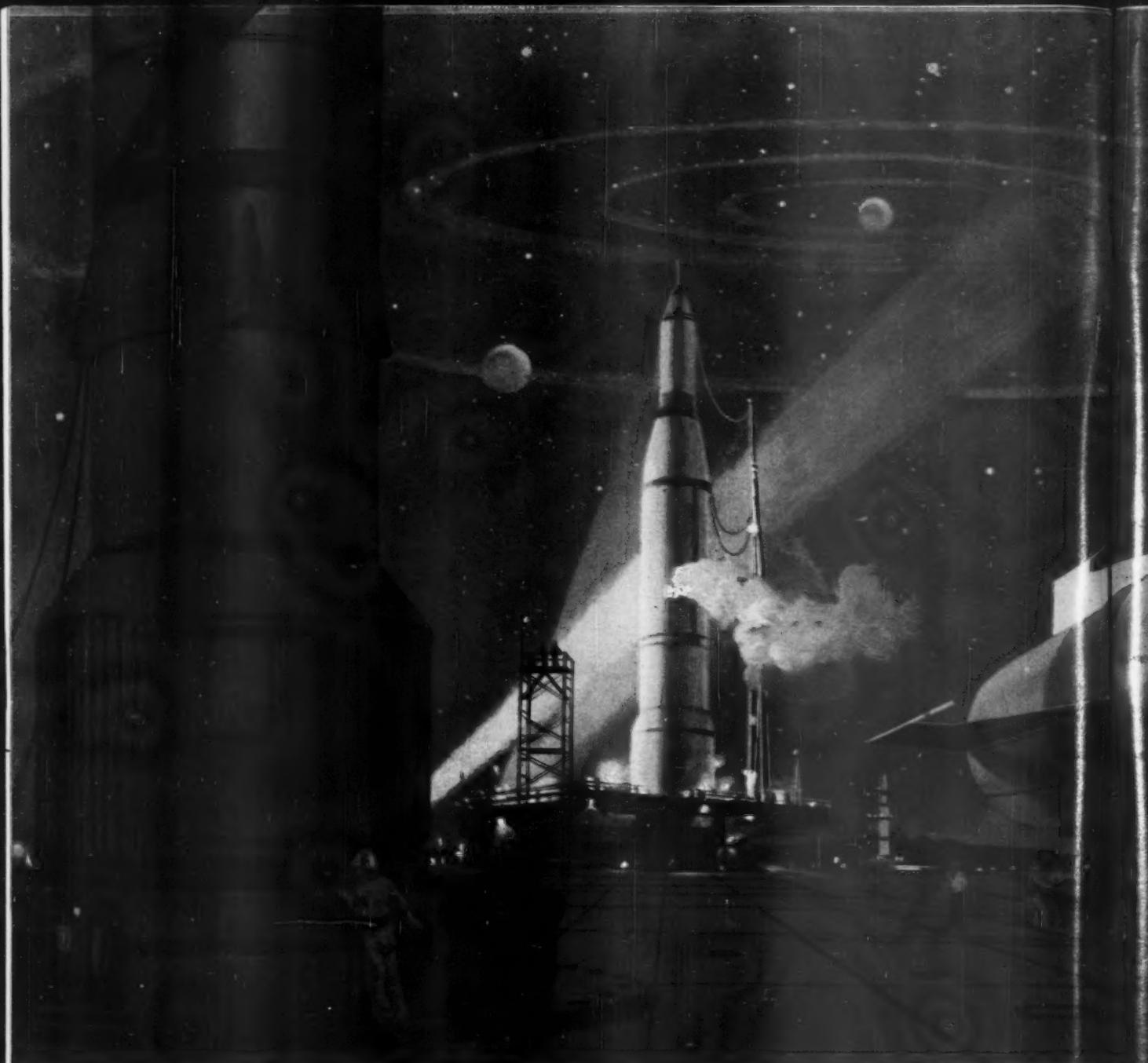
Gardner-Denver CACB carbon piston compressor



100
1859
YEARS

EQUIPMENT TODAY FOR THE CHALLENGE OF TOMORROW

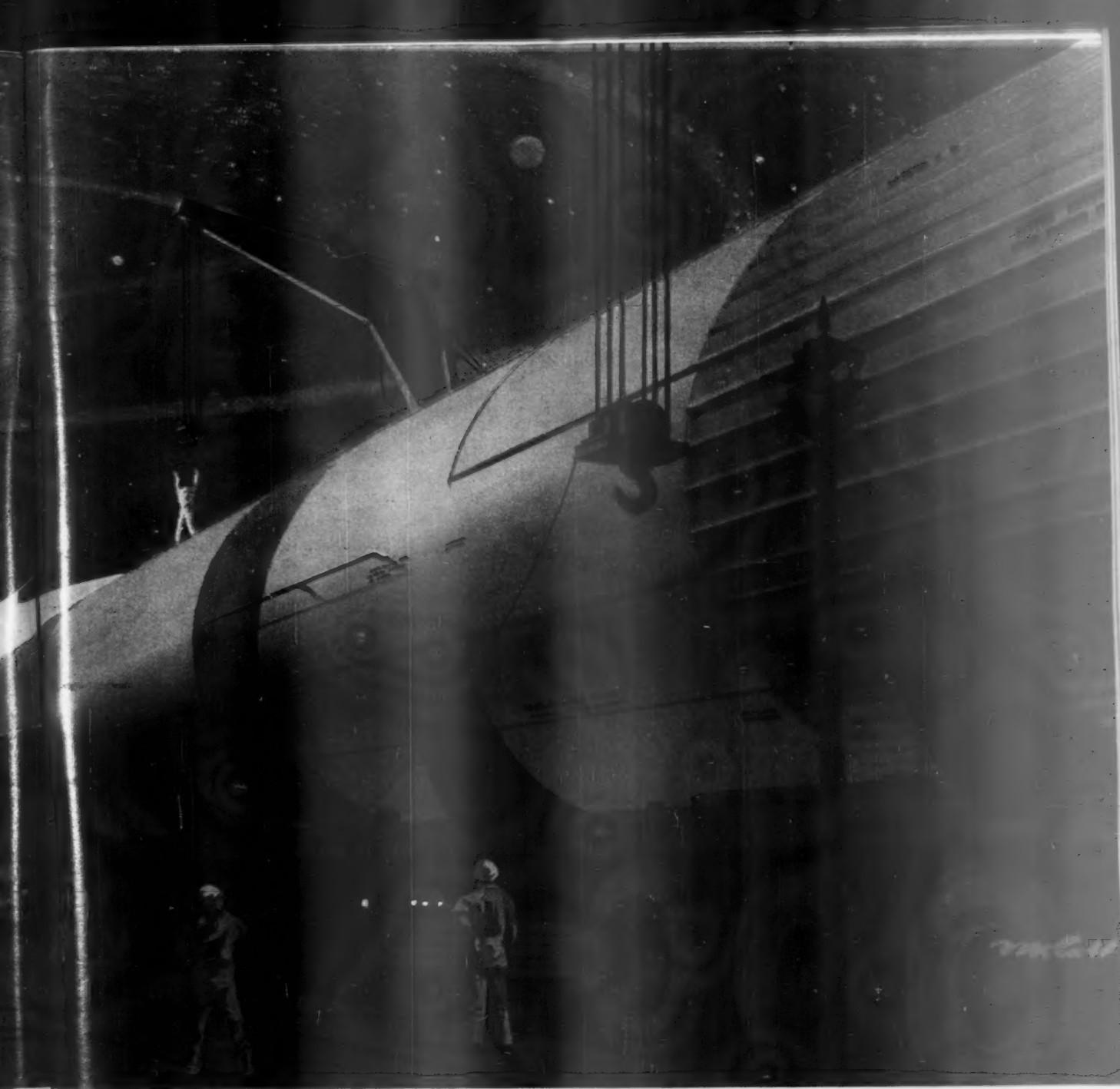
GARDNER - DENVER



target . . . **THRUST!**

The development and production of high energy fuels and components is a major objective of the missiles program now under way at Celanese. It is part of a coordinated effort by Celanese manufacturing companies and research groups—working through Amcel Propulsion, Inc., a Celanese affiliate. As a volume producer of organic chemicals, Celanese Chemical Company is uniquely qualified to contribute significantly to the chemistry and technology of high energy fuels and systems. Many Celanese basic chemicals offer important potential in this field. In addition, Celanese diversified production experience, backed by 35 years of applied research in physical chemistry, provides a solid basis for the development of new and improved propulsion systems. For specific information and technical assistance regarding monomers, polymers, organic and nitratable chemicals, write: Celanese Chemical Company, a Division of Celanese Corporation of America, Dept. 568-K, 180 Madison Ave., N. Y. 16.

Celanese®



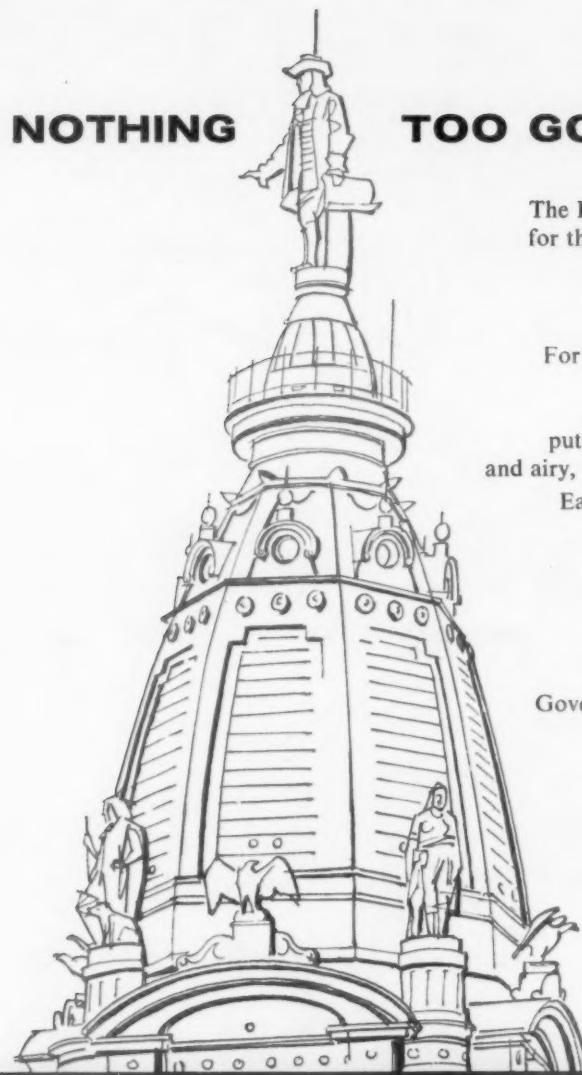
high energy chemical fuels to speed the space program



Canadian Affiliate: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver
Export Sales: Amoco Co., Inc., and Pan Amco Co., Inc., 180 Madison Ave., New York 16

NOTHING

TOO GOOD FOR PHILLY



The Budd Company is building 270 new cars for the subway-elevated lines in Philadelphia.

This is big news for the Quaker City. In fact, it is important to *every* city with a mass transportation system.

For these cars are as modern as 1960. Their structure is gleaming, stainless steel, the strongest and safest material ever put in passenger cars. Interiors will be light and airy, with a special new system of ventilation.

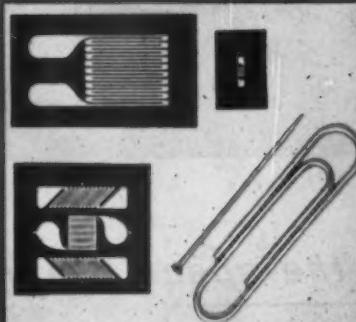
Each car will seat 56 persons comfortably.

Rapid acceleration and quick, smooth stopping are assured by a lightweight, high-speed traction motor.

This new complement of cars is a joint investment of the Philadelphia Transportation Company and the City Government. It will provide the finest of city transportation for many, many years, with remarkably low cost of operation maintenance.

Budd

Philadelphia • Detroit • Gary • Inglewood



TATNALL MEASURING SYSTEMS COMPANY—This division of The Budd Company makes a variety of measuring devices. The bright, abstract-looking patterns in the black squares above are MetalFilm strain gages. Used for detecting stresses and strains, some must be unusually small for use in restricted areas on missiles, aircraft, and other highly critical structures.



THE INTERNATIONAL DIVISION—This Division's activities are evident here in the shipment of powerful radioactive material to a company in Milan, Italy. Technological abilities and methods used "at home" are made available to countries all over the globe through the International Division.



THE NUCLEAR SYSTEMS DIVISION—The engineer shown here is transferring a capsule of radioactive Cobalt 60 from a radiography machine to a special shipping container, eliminating the customer's concern about handling or replacing the decayed source. Nuclear Systems provides radiography machines, radiation chambers, and radioactive materials that go with them for industries throughout the world.



THE AUTOMOTIVE DIVISION

—This is a view of the fastest fender line in the world, producing over 400 fender sets per hour for automobiles made by one of the "Big Three." It's one scene in the activities of a Division which manufactures many of the parts you see—and some you don't see—in almost every make of vehicle on America's highways.



THE DEFENSE DIVISION—Here, Budd's forte—delicate resistance welding—enables the building of a missile shell with the newest high strength stainless steels . . . without added weight from rivets or weld metal. This Division serves America's defense industries as a source of the finest metal-working knowledge and abilities.



CONTINENTAL-DIAMOND FIBRE CORPORATION a subsidiary of The Budd Company, produces a multitude of intricate, scientifically developed products from plastics, vulcanized fibres, mica and Teflon*. Each piece is specially made to meet tortuous demands of temperature and abuse . . . usually supplanting a heavier and costlier material in the process.
*A registered trade mark of the Du Pont Co.



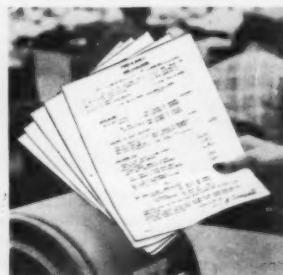
**Verifax Bantam
Copiers \$99⁵⁰ each**

At General Electric Company, Schenectady, N. Y., the advantages of modern office copying—plus the extra savings and convenience of having copiers only "stepping distance" away—are daily demonstrated by this and other Verifax Copiers.

**Kodak Verifax
Bantam Copier
outperforms
copiers costing
up to 4 times
as much!**



Makes 5 dry, easy-to-read copies in 1 minute for 2½¢ each. Verifax copies can be made on one or both sides of bond-type paper, card stock or printed forms for use in systems.



Verifax copies are always clean and accurate—the kind you prefer to read and are proud to send out. These Verifax copies last fully as long as any typed records. Won't fade.



Write with anything—you can copy ball-point, crayon—what have you—as easily as typed data. Even those purplish duplicator copies and rubber stamps are a snap to copy.

5 copies ready to go in 1 minute!

**COMMUNICATIONS ARE FASTER, COPYING SAVINGS
GREATER, WHEN YOU HAVE A KODAK VERIFAX
COPIER RIGHT IN YOUR DEPARTMENT OR OFFICE!**

A wonderful convenience for you and your secretary—for everyone in the department—when dry, easy-to-read Verifax copies of letters, reports, orders can be made right on the spot, fast as needed.

Convenience that pays for itself!

As systems men see it, putting copiers wherever needed is more than a convenience—it's smart business!

For it ends costly "travel time" to a distant copier . . . lets you keep all the savings you get from rapid copying. At the same time it lets everyone take full advantage of all those dollar-saving Verifax short cuts, such as answering half the mail without dictation and typing. Or doing an

all-day retyping job in just 20 minutes. (Short cuts which may be overlooked if the nearest copier is "miles away.")

It's easy to see how the smallest departments and offices—even "one man" offices—can quickly save the cost of a Kodak Verifax Copier (only \$99.50 for the capable Bantam model).

Call in your Verifax Dealer

for free demonstration of Verifax copying right in your office. See how it speeds up routine paper work . . . how it brings remarkable savings to various systems, such as order-handling. Check "Yellow Pages" under duplicating or photocopying equipment.

Price shown is manufacturer's suggested price
and is subject to change without notice.

Verifax Copying

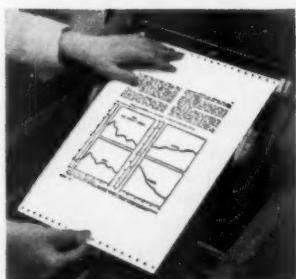
DOES MORE . . . COSTS LESS . . . MISSES NOTHING

MAIL COUPON TODAY FOR NEW BOOKLET JUST OFF PRESS

EASTMAN KODAK COMPANY, Business Photo Methods Division
343 State St., Rochester 4, N. Y.

- Gentlemen: Please send new booklet "How modern office copying adds time where it counts." Also names of nearby dealers.

21-11



Even makes an offset master in 1 minute for less than 20¢ using a low-cost adapter. Translucent masters for whiteprint machines are also made in 1 minute at low cost.

Name _____ Position _____
Company _____ Street _____
City _____ Zone _____ State _____

Kodak
TRADEMARK

General Electric Announces Newest In The Complete Line Of Adjustable-Speed Drives

PARMATIC SPEED VARIATOR... newest in General Electric's complete line of packaged adjustable-speed drives... provides greater machine flexibility, better quality control, higher output and efficiency.

STATIC POWER

for less maintenance, less downtime, added profit. New excitation and power conversion systems have no rotating parts. Sealed silicon rectifiers and saturable reactors need no warm-up, virtually eliminate power unit maintenance.

25% SMALLER

for easier installation. Reliable, long-life G-E components are factory assembled in compact, space-saving power unit, wired and tested before installation to assure accurate control, reduced installation time and expense.

50% LIGHTER

for lower shipping and handling costs. New Speed Variator meets industry's demand for lighter, more powerful drives—packs more power, weighs 50% less than other drives of comparable rating, 2000 lbs less in 100-hp ratings.

STATIC EXCITER with silicon rectifiers for motor field excitation and control power.

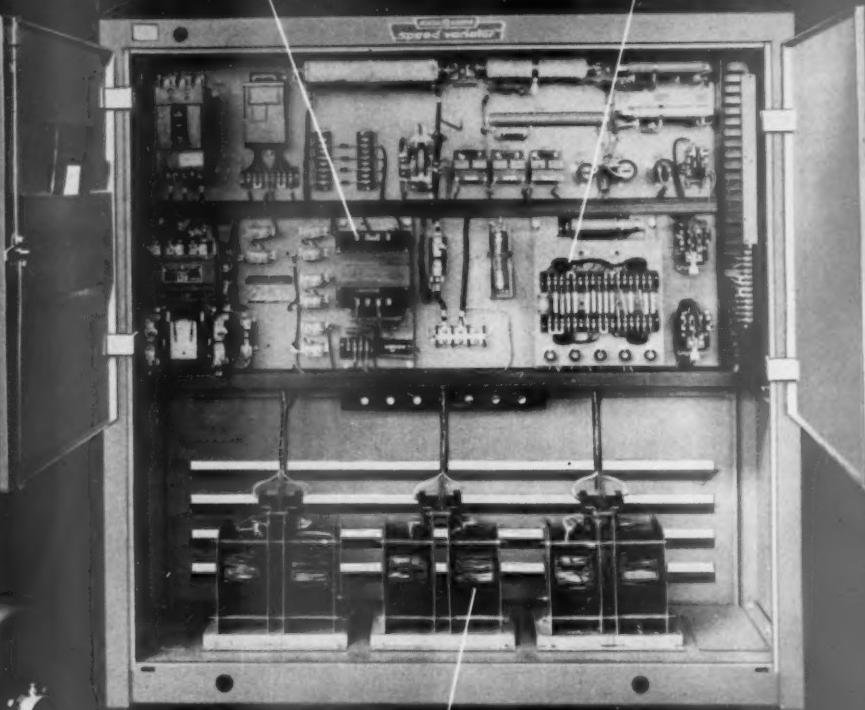
AMPLISTAT REGULATOR with adjustable acceleration and deceleration.



OPERATOR'S CONTROL STATION



KINAMATIC D-C DRIVE MOTOR



SATURABLE REACTORS are virtually impervious to moisture and dirt, require no maintenance.

FIELD PROVEN

by two years' impressive on-the-job performance in several hundred installations in 15 industries. Experience indicates high operating efficiency, lower cost installation and maintenance for a greater return on your investment.

- **GOOD SPEED REGULATION:** 5% with 100% load variation. Closer regulation available with modification.
- **WIDE SPEED RANGE:** Standard Parmatic Speed Variator provides 8 to 1 range or wider if required.
- **RESISTS CONTAMINATION:** Saturable reactors and hermetically sealed rectifiers resist dirt and moisture.
- **QUIET AND VIBRATIONLESS:** New power unit design eliminates noise and vibration—expands drive versatility.

Limitations: G-E Kinematic Speed Variator with motor-generator set is recommended for applications requiring power absorption for stopping or overhauling loads. *For more information, call your General Electric Sales Engineer, or write for GEA-7012, Section 821-1, General Electric Company, Direct Current Motor and Generator Department, 3001 East Lake Road, Erie, Pennsylvania.*

GENERAL  ELECTRIC



Lowest priced of the leading light and*

NEW FORD TRUCKS

- Certified gas savings!
- Certified durability!
- Certified reliability!
- Certified lowest prices!

You save from the start . . . Ford light- and medium-duty trucks are lowest priced of the leading makes. And your savings continue. That's because Ford's economy is *certified*, backed by intensive tests by America's leading independent automotive ex-

perts.† Just look what's in Certified Economy . . . and what's in it for you:

Certified gas savings—to keep running costs low! Tests confirm the gas savings of Ford's 1960 6-cylinder engine . . . the same engine that beat every competitive six in Economy Showdown U.S.A.

Certified durability—to take the toughest jobs you've got! Tests showed, for example, that Ford's new half-ton frame is 23 percent more rigid . . . that new two-tonner brakes have 20 percent longer lining life!

Certified reliability—to keep your truck out of the shop and on the go! Such key truck components as wiring assemblies were tested time and time again—

proved
bility o

The
"Certifi
Be sure
Ford T
1960 m

*Based on
cluding Fed
tion charges

†Name avai

Ford Motor

FOR
Less to



Above: 1960 Ford F-600 Van, F-100 Styleside Pickup and C-800 Tilt Cab bring you the *best* of the new — new smoother acting brakes, new huskier axles, new higher payloads, new riding comfort

and medium trucks!

F FOR '60 with

Certified Economy

proved to have more than three times the reliability of other assemblies.

The certified results of all the tests are in the "Certified Economy Book" at your Ford Dealer's. Be sure to see it soon . . . be sure to see the new Ford Trucks . . . be sure to see the lowest priced 1960 models . . . and you'll be sure to save!

*Based on latest available manufacturers' suggested retail delivered prices, including Federal excise tax, excluding dealer preparation, conditioning, destination charges.

*Name available on request. Send inquiry to P.O. Box 2687, Ford Division, Ford Motor Company, Detroit 31, Michigan.

FORD TRUCKS COST LESS

Less to buy . . . less to run . . . built to last longer, too!

Steel and aluminum users report increased values from Ryerson

These case histories—selected at random from our files, provide additional evidence that you consistently get increased value for your purchasing dollar from Ryerson. Individual points of difference between Ryerson and other sources may not by themselves seem overwhelming—but in total they add up to an important difference in dependability, experience and capacity to serve.

A world famous manufacturer formerly tested all steel purchased from steel-service centers for critical ordnance work. But, often, test costs on small lots of steel were greater than material costs. So the company decided to concentrate its purchases with sources proved completely reliable—and discontinue its own testing. Experience showed that the required certifications of quality were always absolutely dependable in the case of only three steel suppliers—among them Ryerson where quality has been a watchword since 1842.

Milling operation eliminated. A structural fabricator followed the usual practice of milling the ends of beams to be used as column bases until he discovered the accuracy and squareness of Ryerson friction sawing. Now he has eliminated the milling operation because, at no extra cost, Ryerson can guarantee friction saw accuracy of only $\pm 1/16"$ for beams up to 6" and $\pm \frac{1}{8}"$ for sections over 6"—squareness tolerances of .010" per inch of section.

Better product appearance and a worthwhile saving in material cost resulted when a Ryerson man recommended that a producer of portable coolers switch from one aluminum alloy (3003-H14) to another (5005-H14). Slightly higher structural strength was a bonus value. Unusually broad aluminum stocks and technical resources often enable Ryerson to serve in this way.

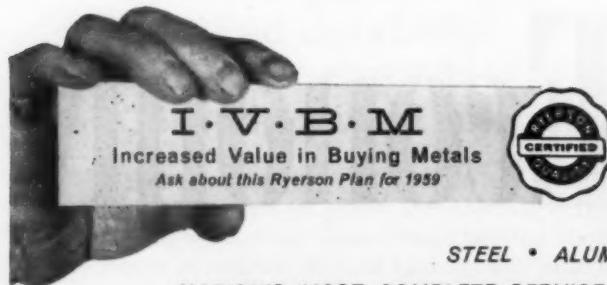
The need was urgent. A breakdown was cutting output of a big paint producer, and the steel needed to repair the break was not available in the area. However, the required analyses and size was on hand at the nearest Ryerson plant 200 miles away—and within an hour Ryerson delivered 100' of this bar stock to the local airport. Three and a half hours after calling Ryerson in another state, the customer had his steel.

"**Deeper cut, better finish, longer tool life, and lower total per-piece cost.**" These were the results reported by a Mass. machining company after it switched to Ryerson Rycut® 40 alloy steel for shafts, gears and spindles used in rugged machine tools. Ryerson Rycut steels are the world's fastest machining in their carbon ranges.

Missile component problem solved. Titanium stringers in stainless forged bars were creating a high reject rate for a missile parts manufacturer. His Ryerson specialist recommended a switch from Type 321 stainless to Type 347. Results: the same stabilized corrosion-resistance and strength—but no titanium stringers.

Furniture manufacturer saves 15¢ per unit on every chair produced. A rolled aluminum angle was being used where strength was not an important factor. A Ryerson aluminum specialist suggested an extruded angle which gave all the strength needed in the application, was more easily formed, had better appearance—and reduced costs as well.

These are just a few examples that illustrate the advantages that make Ryerson service truly unique. A call to your Ryerson representative may solve similar problems for you.



RYERSON STEEL®

Joseph T. Ryerson & Son, Inc., Member of the INLAND Steel Family

STEEL • ALUMINUM • PLASTICS • METALWORKING MACHINERY
NATION'S MOST COMPLETE SERVICE CENTERS IN PRINCIPAL CITIES COAST TO COAST

BUSINESS OUTLOOK

BUSINESS WEEK
NOV. 14, 1959



It's great to have the steel mills open again, but now production programming becomes the big headache for most metal users.

Things will be at sixes and sevens for some time. You saw it this week in autos. Ford said at once it would work more than last week's three days even as General Motors prepared to suspend entirely (page 30).

You'll probably get steel sooner than your supplier promised (page 25).

The mills have been cautious. They didn't want to raise customers' hopes too high. They weren't sure what they'd find on reopening (though the closing could hardly have been more orderly than it was).

Now it seems little damage has been encountered. Furnaces were relighted quickly, shipments will step up pretty rapidly.

Here's one of the fastest reopenings—too fast, in fact, to be typical: Buffalo area mills, at midweek, announced that they were operating at about 90% of capacity.

Nobody can be certain that the steel strike will not be resumed; there isn't even any guarantee that recalled workers will stay steadily on the job. Wildcat strikes could hamper output, or a resumption of the big walkout after 80 days could snarl things worse than ever.

However, an interruption would set very badly with Congress. So would a rail strike, for that matter. And Congress will be back in session before (1) steel's 80 days are out, or (2) the rail deadline rolls around.

—•—

Events of the last three months—and prospects for the next three—will cast a shadow over existing and forthcoming wage negotiations (page 150).

Neither side will want to risk inviting legislative retribution. Neither will wish to prejudice its interests in the upcoming elections.

Yet, even so, management has taken its stand against a cost-raising settlement. It will go on battling.

—•—

Whatever the 1959-60 "pattern" for wage agreements, the upthrust probably cannot be completely taken out of prices.

In fact, costs of manufactured goods and raw materials have been edging up on average even as negotiations dragged along. The scramble to keep from running out of raw materials has contributed to this.

Now the rush to build inventories will work to the same end. A lot of buyers will be not only willing but anxious to bid prices up.

Wholesale prices of items other than farm products and processed foods, as reported by the Bureau of Labor Statistics, have risen by a fraction of a percentage point since the steel strike started (and by nearly 2% over a 12-month period). The fast moving index of metal prices, in spot markets, has risen 12% since the walkout began (with gains for copper, zinc, and steel scrap playing a conspicuous part).

Efforts to hold the price line should not be ignored, however, even though the upward pressures are obvious.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

NOV. 14, 1959

Washington's tight money policy will be a central point. This aims at preventing demand from overreaching itself. It will help to restrain the inventory surge, and it certainly will curb housing. Marginal borrowers will have to reappraise plant-and-equipment expenditures.

Several basic factors will be helping to hold the price rise to a crawl even if it can't be stopped entirely:

- Supplies will be ample of most things yielded by the earth—ores, fuels, and crops. Strikes that limited ore and oil output will be behind us, while U.S. food output doubtless will continue to outrun needs.
- Employers will hold down wage boosts to the smallest possible.
- Imports will have prices of many products by the coattails.
- Consumers will trim sail one day when they find they have been borrowing too freely—though that day still looks pretty distant.

Consumer spending bounced right back in October, leaving the September dip in retail trade only as a nick in the 1959 curve.

The estimated level of retail sales, seasonally adjusted, was nearly \$18.3-billion in October, the Commerce Dept. reports. That's right in line with the record totals from May through August.

This resumption-of-trend is important mainly as evidence that strikes have put little if any crimp in effective demand. The September dip may largely be blamed on unseasonable weather (BW—Oct. 17'59, p20).

Indicated consumer spending on durable goods last month—the kind of buying that relies heavily on credit—was at a record \$6.3-billion total. That was substantially better than any earlier month this year and 17% higher than October last year.

This mainly reflects auto sales much higher than usual—a showing which is gratifying but must be weighed in the light of the early introduction of new models. In no other October since the war have so many of the new cars been available to buyers in that month.

Conversely, September's auto sales were unusually small due to the early shutdown for the model change-over.

Retail sales for 1959 may not reach the \$220-billion indicated earlier due to scarcity of autos and appliances in the wake of the steel strike. But a new peak around \$215-billion now is assured, up from the previous record of \$200-billion set in 1957 and matched in 1958.

Employment and unemployment figures for last month not only suffered from the steel strike; the aftermath will be clearly visible in the labor force figures for November and, to some extent, in December.

Unemployment went up slightly to 3,272,000 last month, moving against the normal trend. And employment, though it rose half a million to a record October level of 66.8-million, doubtless would have topped 67-million but for the dent put in 1959's recovery by strikes.

The best previous figures for October employment were 66.2-million in 1956 and 66-million in 1957; last year's was 65.3-million.



PRODUCER'S PARTY—AFTER THE FIVE-HUNDREDTH PERFORMANCE OF "THE BOY FRIEND"

WHEN THE GRAND GESTURE IS EXPECTED . . .

Since 1878, Martin's 12 year old has been revered as one of the world's most distinguished and most appreciated aged Scotch whiskies.

None other so rightfully belongs to special occasions or is so warmly received as a truly impressive gift.

Like all Martin's Scotches, Martin's 12 year old is independently distilled by the same family, and blended to the same superb flavour, year after year.

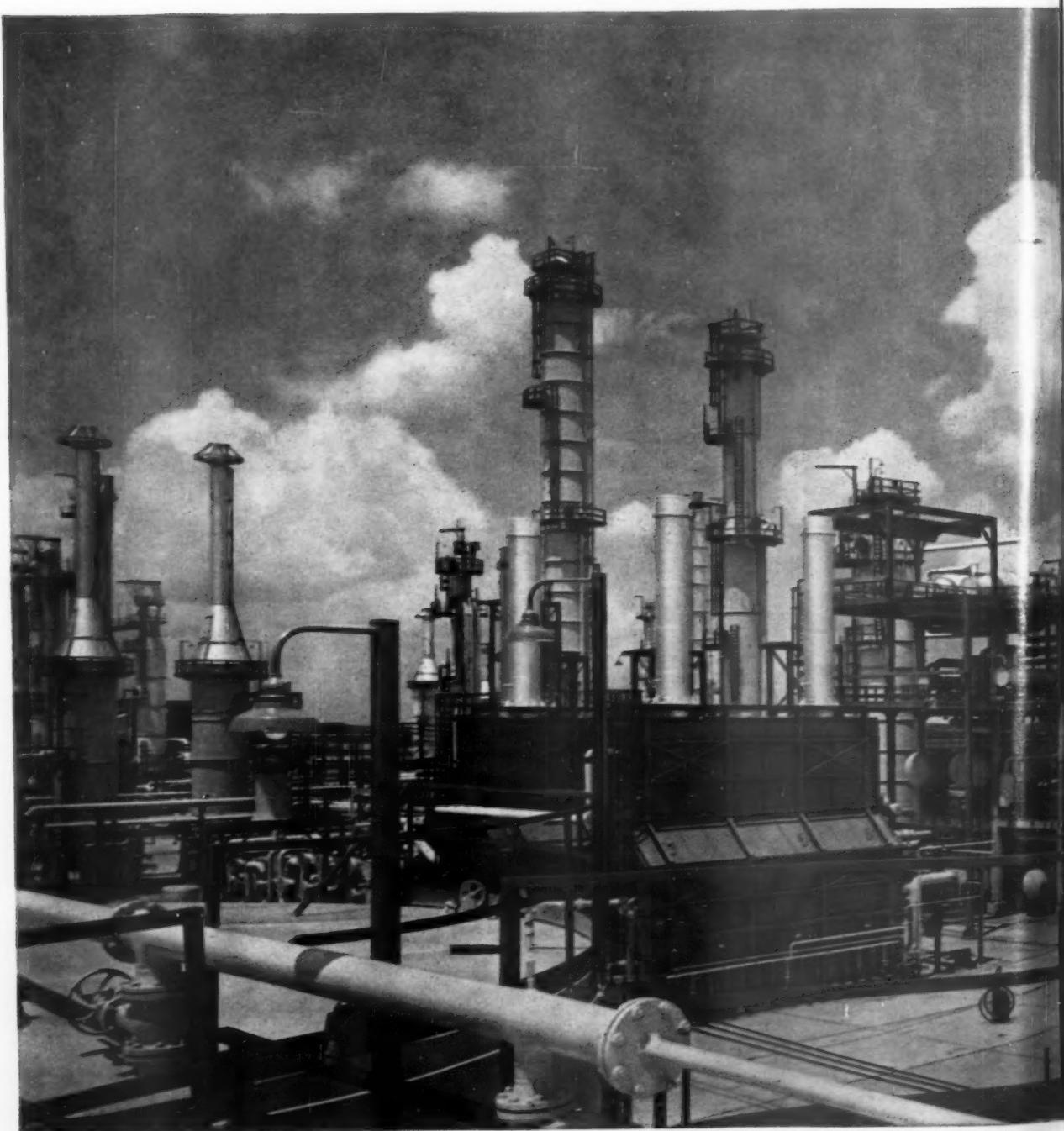
It is now, and will remain always, the finest expression of the "grand gesture." © McK. & R., '59

MARTIN'S 12 YEAR OLD SCOTCH

ALSO MARTIN'S FINE AND RARE (20 YEARS OLD). BLENDED SCOTCH WHISKIES. 86.8 PROOF. IMPORTED BY MCKESSON & ROBBINS, INC., NEW YORK, N.Y.



MORE BASIC PETROCHEMICALS FROM GULF TO FEED INDUSTRY'S EXPANDING APPETITE



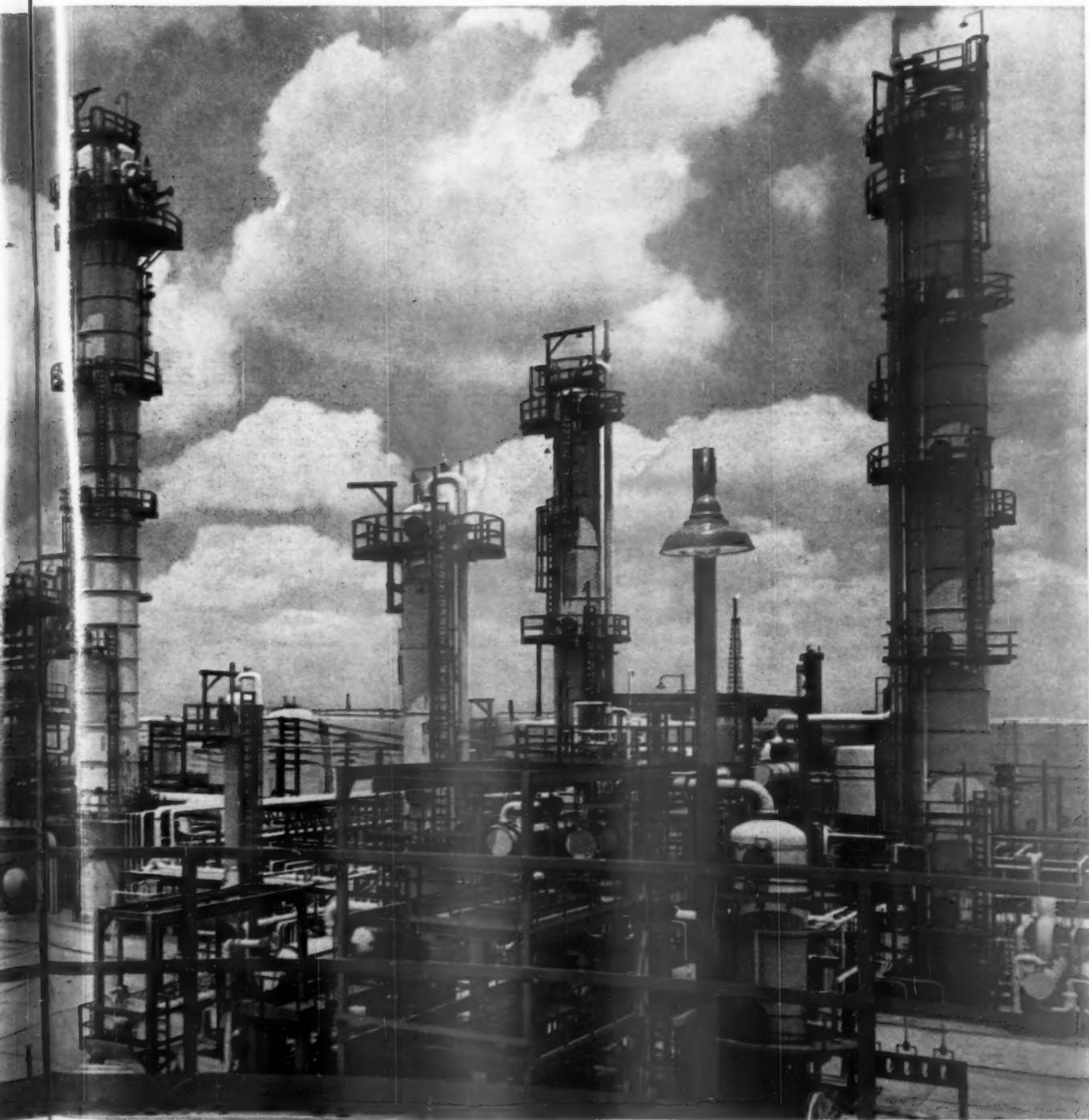
Something new has been added to the skyline of Port Arthur, Texas. It's Gulf's new benzene plant—with a capacity of over 30 million gallons per year—the largest single benzene production unit in the world.

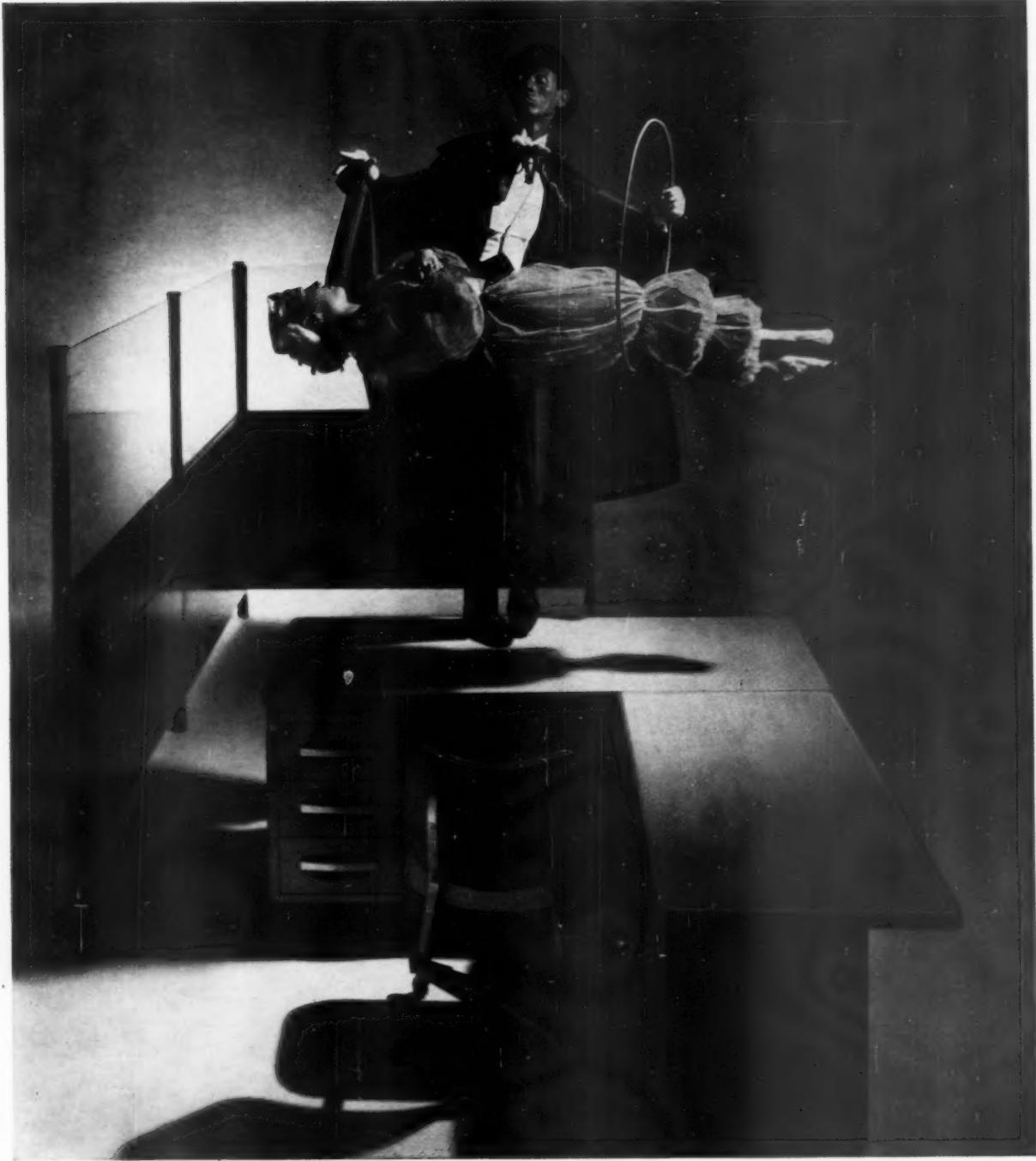
With this new facility onstream, Gulf is now a leading producer of the two largest-volume organics used in America's fast moving chemical industry today: ethylene and benzene. If *your* raw material requirements include highest quality benzene or ethylene—or any other large volume chemical building block—look to Gulf as a basic source of supply. Write or phone Petrochemicals Department Sales Office, Gulf Oil Corporation, 360 Lexington Avenue, New York 17, New York.



**Quality Chemicals
from Petroleum**

Benzene • Ethylene • Isooctyl Alcohol
• Propylene • Propylene Trimer and
Tetramer • Sulfur • Toluene





WORK magic with office space . . .

Only Arnot by Royal gives you such flexibility, such maneuverability

You don't have to be the magician. Let our space engineers show you the magic of Arnot by Royal. Make office space pay off. Convenient, practical, beautiful! That's the Arnot "custom" installation — everything modeled to make space work for a living — efficiently, profitably. Write for the brochure that tells the story — Arnot modular furniture and space-dividing Arnot Partition-ettes by

Royal. Now is the time to write for it — plus the name of your nearest Arnot dealer. Arnot Division of ROYAL METAL MANUFACTURING COMPANY, One Park Avenue, New York 16, N. Y.

SHOWROOMS: New York, Chicago, Los Angeles, San Francisco, Seattle, Galt, Ontario • LICENSEES: France, England, Australia, Venezuela
FACTORIES: Plainfield, Conn., Michigan City, Ind., Los Angeles, Calif., Warren, Pa., Jamestown, N. Y., Galt and Smiths Falls, Ontario

Royal
OFFICE FURNITURE

NOVEMBER 14, 1959

NUMBER 1576

Steel Gets Off to Running Start

With steelworkers back on the job under Taft-Hartley, the startup of the mills has been swift and skillful.

Chances are that close-to-capacity operations will be as much as two weeks ahead of earlier predictions.

Biggest worry is that the 116-day shutdown might have caused plant damage; so far, little has been found.

Any manager whose job depends on steel supply can go ahead and play golf this weekend. He's not out of the woods yet, but the flow of steel products isn't going to be as dismally delayed as he may have been led to believe.

In three to four weeks, most steelmakers will be operating close to 90%—which is about as close to capacity as most of them get short of war. Those producers who have made public their estimates of startup time sound less optimistic than that. Their consensus is five to six weeks before 90% or "near capacity" operations. But that's more conservative than a hard-pressed steel user need live with.

Why the Speed—There are two reasons:

- The startup has been fast and smart and lucky.
- The estimates made public by steelmakers as to the time required to attain this level or that of shipments are as conservative as the gold standard—set that way deliberately for several obvious reasons.

A Pittsburgh steelman put it this way this week: "No operating man will promise his sales department any steel he can't deliver. He'll put a safety factor on every step of the steelmaking process and multiply the sum of them all by a telephone number. Furthermore, he'll put every last repair and maintenance job he can into the schedule while the mill is shut down and the equipment is cold."

But not all those jobs will stay in the schedule. That's because the sales departments are under the most extreme pressure from every customer. Of itself, that pressure induces some of steel's conservatism. Steelmen feel they need a certain amount of protection, behind which to do the best job that can be done with what's available. It

helps keep the customers at least a little bit off their backs and lets them accomplish the maximum possible in the critical early weeks of the startup.

Standing in Line—There's one fundamental caution, of course: Until a steel contract is signed, every steel buyer in the land who believes 1960 will be a good business year will be scrambling for all the steel he can buy—particularly at mill prices.

Hence, schedules will remain tight and there'll be considerable standing in line. Hardly anyone is going to accumulate a comfortable inventory against the possibility of a post-injunction strike; the steel buyer will beat more bushes than the steel salesman will. Even so, shipments won't be agonizingly slow even in the first half of the 80-day injunction period. There'll be a good deal of steel, even if you have to scramble to get your share.

I. The Long Weekend

One of the most important steel operating men in the U. S. was dozing on a country club locker-room bench at 9:08 a.m. Saturday, Nov. 7 when a radio news bulletin bit into his con-

The Strike Ends

How a typical mill resumed work	p. 25
Where the bargaining stands now	p. 150
The plight of steel users	p. 30
What the strike cost	p. 31
Unwelcome inventory profits and taxes	p. 65
The argument over inflation in steel	p. 147
What it means to industry	p. 184

sciousness. "I heard the words 'and 500,000 men go back to work,'" he said, "and I knew the Supreme Court had done me out of a golf game."

The court, to be sure, startled no end of steelmakers, but it didn't throw them off stride. In quite a few producing locations, the operators were ready for maintenance men even before the local unions had official word from headquarters to pull the pickets and open the mills. Mostly, it was 1 to 4 p.m. (EST) before the first of them trooped in.

Prepared—Naturally, every operator had his startup thoroughly planned. But in a number of plants, including some pretty important ones, they had more than just work assignments ready to go. At one plant, for example, almost 40% of the open-hearth capacity was pre-heating at 2,000F on Friday evening before the ruling—and the charging bugies for each furnace were loaded.

On Sunday, the country's newest steel mill—U. S. Steel's Fairless Works, on Delaware River tidewater just above Philadelphia—tapped an open-hearth heat at 6 a.m. Its 50-year-old big brother, at Gary, Ind., was only 15 minutes behind. Bethlehem Steel, at Bethlehem, tapped one before 7 o'clock.

Not every producer got started that rapidly, of course, nor did every plant—even of the most fortunate companies. Steelmaking is governed by both a national contract and quite a few local agreements; the latter are the sources of the great dispute over work rules, which stalemated and prolonged the steel strike. Those local agreements vary no end. Thus, some plants got a good deal more accomplished during 116 strikebound days than others.

Happy Crews—"In no previous startup have I seen men work like these people did," said Carl Breuer, operating vice-president of Pittsburgh Steel Co., the morning after its startup began (page 26).

Practically without exception, other steelmakers agreed. It wasn't always easy to find the men who were most needed, that Saturday afternoon—the millwrights, bricklayers, electricians, riggers, and all the rest of the specialists who have to get into a shut-down mill first.

But when they reported, they were

ready for the hard, dirty, dangerous work of startup. A BUSINESS WEEK survey of producing centers didn't turn up a single complaint. Mostly, it turned up some warm praise for the spirit of the returning workers.

"That's pretty encouraging," said a major Pittsburgh steel buyer at midweek. "I hope it continues. If the men are working as enthusiastically two weeks from now as they seem to be today—and if the equipment damage is no more serious than our suppliers have told us about so far—the shipments should be flowing faster than the producers have been indicating they would. We sure need them."

II. What's the Damage?

The big if—as that steel buyer mentioned—is damage to producing equipment. When you try to assess that, there are several points to consider:

- You don't necessarily find all the damage in the first 72 hours.
- You have no standard to guess by, for there's never been so prolonged a shutdown in the history of today's steelmaking technology.
- And you're dependent for raw steel itself on seven separate types of equipment that operate at or above 2,000°F. Each is contained by refractories that are susceptible to thermal shock when they cool off or heat up. If this shock is severe enough, it halts the process right there.

• **So Far, So Good**—Subject to those imponderables, quite a few steelmakers agreed at midweek that equipment damage had been surprisingly light. One sizable producer cautioned on Tuesday that it still has 15% of its open-hearth capacity out of service—some from damage, some it hadn't yet gotten around to.

Its caution, though, was deceptive. At capacity, that producer would expect to have 6% to 7% of its open hearths unavailable. So it really was saying that within 72 hours it was back not very far below its normal steel-making capacity.

The one question as to damage that intrigued operating men most—the durability of the all-basic open-hearth roof—was answered happily at midweek. The all-basic open-hearth (BW—Oct. 25 '58, p63) is expensive but extremely promising. Almost everybody had at least one in service before the strike, but absolutely no one had any shutdown experience on them.

"We haven't lost one," said a general manager who operates a number of them. "I suspect we may have lost some service life, but we haven't lost a basic roof. There's no question, if that continues, it'll mean we can produce a lot more steel a lot sooner than we could have otherwise."



SATURDAY 10 A.M. Shortly after receiving news of Supreme Court's ruling upholding the injunction, Manager Edwin Dawson makes a last check of desolate open hearths in Pittsburgh Steel's Monessen Works.



1 P.M. Carl Breuer, Pittsburgh Steel vice-president, hears local union's answer to call for maintenance men: no return to work until United Steelworkers international sends official notice—which was on the way half an hour later.

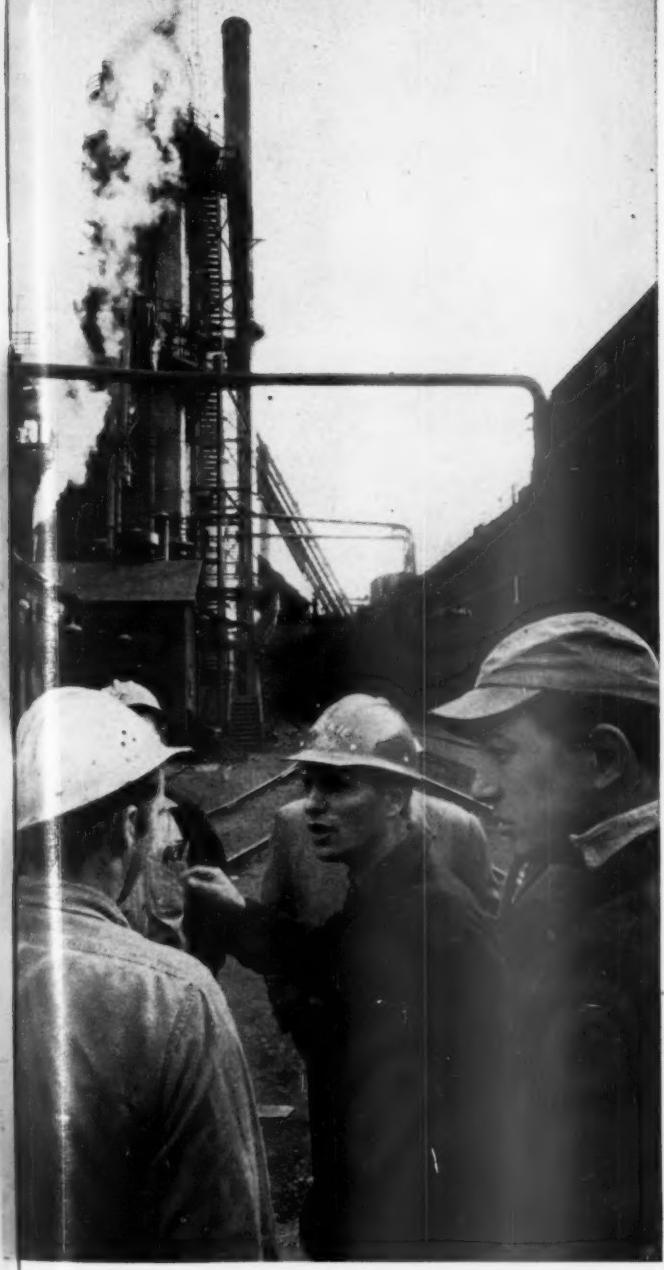
Monessen Goes Back Into Business

Massaging the tight, cold muscles of a steel mill back to life after a 116-day paralysis takes skill and patience. The pictures above and on the following pages show how the job was done at a typical plant—the Monessen Steel Works of Pittsburgh Steel Co., 14th in the industry in capacity.

At Monessen, a steel town south of Pittsburgh along the Monongahela River, the task began as soon as the U. S. Supreme Court upheld the Taft-Hartley injunction last Saturday morn-

ing. Fortunately, key personnel were at the plant when the news came. The group—Monessen's works manager, Edwin A. Dawson; his assistant, Albert Lami; Nicholas ("The Lawyer") Polkabla, director of industrial relations; Carl A. Breuer, vice-president for operations, and Herbert A. Long, general manager of operations—had assembled to winterize the mill if necessary.

• **Bulletin**—A telephone call from a mill worker's wife brought the first word of the high court's ruling. Only



4:15 P.M. Workers huddle around foreman for instructions on repairing a dormant blast furnace. Supervisors were surprised by the crews' enthusiasm at helping to get mills rolling again.

a few moments later, the brass started summoning department supervisors; some were already en route. In less than an hour, the supervisory staff had made the last of many shutdown inspections of steam pipes, open hearths, blast furnaces, and other facilities. Dawson and Lami pulled startup plans from their files. By noon, the two were able to estimate how soon Monessen could start shipping steel.

• **Where to Start**—Dawson's problem was to get as many parts of the mill running as fast as possible. It was impossible to begin at the beginning of the steelmaking process—in the blast fur-

naces, where iron is made from ore and coke. Blast furnace repairs would take days. Instead, the start had to come in the second stage of steelmaking—in the open hearths, which transform molten iron into steel. Enough cold iron and scrap was on hand to feed them.

Production could also start almost immediately in the soaking pits, with cold ingots already in stock. Normally, steel from the open hearths is poured into ingot molds, and these ingots are brought to rolling temperatures in deep soaking pits. From the soaking pits, hot ingots are rolled down to slabs and rounds for the company's Allenport



4:30 P.M. Laborers shovel out crumbled magnesite eaten away from the floors of steelmaking open hearths during the industry's longest shutdown.

sheet and tube mills five miles upriver. The sheet mill couldn't start until Monessen resumed deliveries. (Allenport's tube rolling mills, however, could go back into business within 36 hours. They had tube rounds for two weeks.)

• **Official Notice**—The supervisors made themselves a quick lunch of sandwiches in the office kitchen and then called the local United Steelworkers office. Could enough maintenance men be rounded up for the 4 o'clock turn? The answer was no: not until official notice of the Supreme Court decision arrived from the international union.

By 1:30 p.m. telegrams ordering the



SUNDAY 8:30 A.M. After staying at plant till midnight, Vice-Pres. Breuer returns.

local to comply with the injunction were on the way, and company brass began calling back 600 workers for the first 24 hours. A little after 3 p.m., the first worker—toting his clean work clothes in the traditional shopping bag—walked through the main gate and asked for his time card. The startup was on.

Workers began showing up about the same time at Allenport, but at Warren, Ohio, where Pittsburgh Steel has a cold-rolled strip mill, the union local was still meeting. This worried Breuer.

• **Cleanup**—Back at Monessen, the workers' first job was to clean up the



SUNDAY 6 P.M. Helper throws burning wood to light the first open hearth. The refractories are so cold that the atomized oil takes an hour to ignite, but the startup at Monessen is still ahead of schedule drawn up by officials.



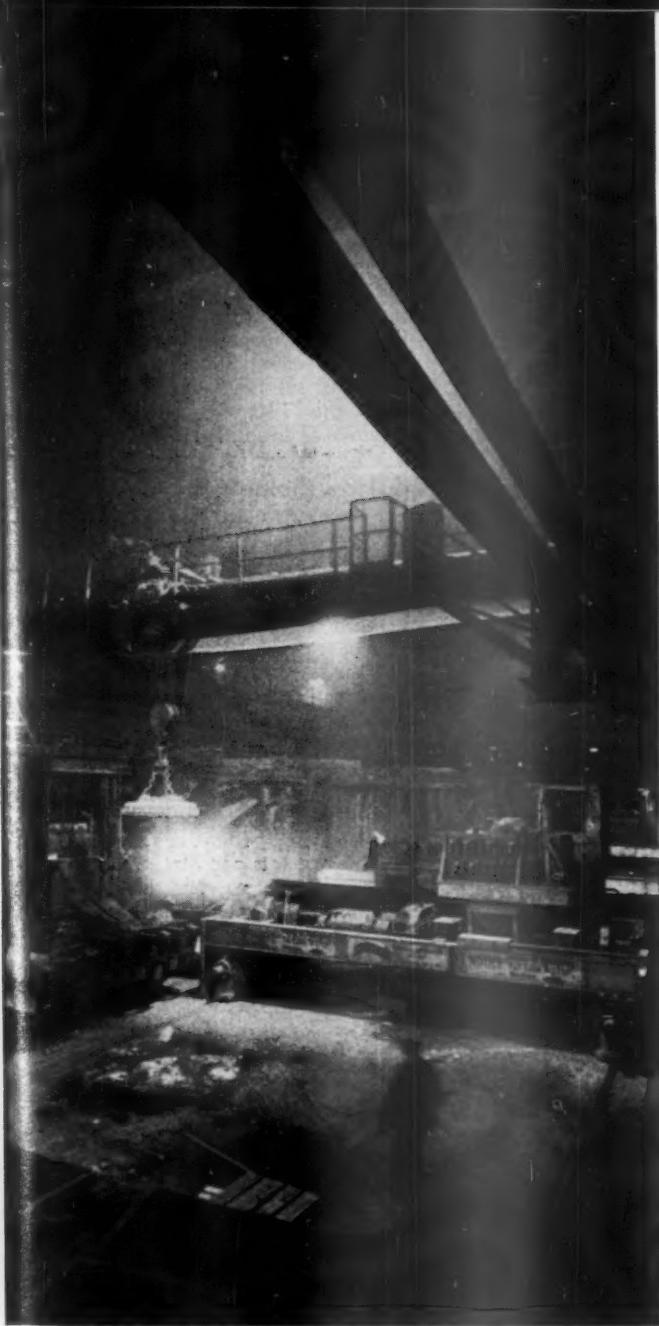
MONDAY 9 A.M. At Pittsburgh Steel's Allenport tube and sheet mills, five miles from Monessen, pipe has been pouring out since midnight. First carload of tubular goods went to a New Bedford, Mass., defense plant.

open hearths and soaking pits. In 116 days, enough moisture had seeped into the floors of the open hearths to eat them down almost to the foundations—something that had never happened before during a shutdown. In the soaking pits, repairs would take bricklayers a minimum of eight hours; heating up would take another several days.

At 5 p.m., a disturbing report reached Dawson in the main office. Out of 40 bricklayers and laborers summoned for the first turn in the soaking pits, only about 12 had appeared. Workers were missing from the open hearths, too.

Just then, though, Warren reported the local meeting over and men reporting for the first turn. And Allenport said its men were overlooking work rules and job descriptions for the time being; they seemed interested only in getting the mills rolling again.

• **Day's End**—Six o'clock found Dawson and Lami touring the open hearth department. For a minute, they wondered if they had been wise to decide against keeping all the furnaces warm through the strike by burning natural gas in them. They had done this in several older open hearths with only



TUESDAY 4:45 A.M. The first open hearth is charged with cold iron and scrap to make the first heat of steel. Within minutes, four more open hearths are filled.

a few heats of life left, but not in all 12, because of the cost. If the newer furnaces could be heated up now without much trouble, their judgment would be vindicated.

From the open hearths, the two officials moved to the soaking pits, where 24 bricklayers and laborers were working by then instead of only a dozen. More were reporting all the time. Many had been out hunting, or shopping with their wives, or otherwise out of reach when the callback came.

By midnight Saturday, six soaking pits had been lighted.

• **Sunday Without Rest**—On Sunday

morning, the entire third turn reported. The brass spent the morning inspecting the work on the two banked blast furnaces (Monessen has three blast furnaces, but the third, due for a complete rebuild, wouldn't be producing iron for several months). One furnace needed only three or four days of repairs, the other about a week's work to finish a rebuilding.

A visit to the open hearths brought smiles. Two open hearths would be lighted about 5 p.m. Sunday; heats of steel made from cold iron and scrap could start flowing Wednesday at the latest. And 15 of the soaking pits would



WEDNESDAY 1:49 A.M. First steel in nearly four months pours from an open hearth. Scheduled next: iron from blast furnaces.

be heating up by midnight Sunday.

By Monday morning, there was more good news. Two open hearths could be charged the next morning, almost a day ahead of schedule, and Allenport had started pouring out tubular goods Sunday midnight.

At midweek, the men in charge had only two main problems left. Would the blast furnaces, never before banked so long, cause trouble when they started burning? And could Monessen supply enough steel to keep Allenport going? Like their counterparts throughout the industry, with similar worries, they were awaiting the answers.

Plant Layoffs Will Increase

● Halt of steel strike brings no easing, and for hundreds of steel users the worst is yet to come.

● Heaviest layoffs are at General Motors, with 225,000 furloughed—and more auto workers will go by yearend.

● Some industries keep going by swapping, foreign supplies, or grey market—but this boosts costs sharply.

The steel mills are open again, but for hundreds of steel users in as many different parts of the country the worst is yet to come. They are already scheduling further layoffs of their employees, trimming their work weeks from five or six days back to four days. For the next four or five weeks they expect their search for what they can get of the dwindling supplies of specialty steels will grow tougher.

Says Milwaukee manufacturer A. O. Smith Corp.: "We expect it will be four or five weeks before we're back to full employment again." And in Syracuse, N. Y., Carrier Corp.'s Vice-Pres. Anthony Ruediger says: "We're still operating normally, but sometime after Nov. 20 we will have to begin furloughing some of our employees for lack of steel."

• **Waiting in Line**—Since Monday this week hundreds of executives of steel-using companies have been waiting in steel company offices, clamoring for word on how long it will be before orders are filled. By midweek, few of the executives to whom BUSINESS WEEK reporters talked had got precise answers. Many had, at best, rough estimates that orders placed early in August would be delivered in six to eight weeks or more depending on the types of steel they want.

From now until the end of the year it seems certain that the after-effects of the strike will harass hundreds of companies. Some of those that still have enough steel expect they will run out before the supply lines are opened again; others fear they will be hit when their suppliers or the buyers of their products run out of steel.

In Philadelphia, for example, where 10,000 workers have been furloughed in steel-using industry since the strike began, the state employment service now expects 10,000 more will be out of work for lack of steel within the next three weeks.

I. Where Layoffs Hurt Most

The heaviest layoffs caused by lack of steel have come at General Motors. By midweek, all GM's auto assembly

lines were closed; its Willow Run Corvair plant was the last to go down. Now only a few truck lines are operating, and 215,000 hourly paid GM workers are laid off.

Assembly operations probably will not resume at GM until mid-December. But within 10 days, GM will begin recalling workers in its supplier plants. Nevertheless, many auto workers will get no more paychecks before Christmas.

At Chrysler Corp. it's expected that about 15,000 of the 80,000 hourly paid workers will be furloughed by this weekend. The word in Detroit is that Dodge car assembly lines will close down at the end of this week and that all Chrysler Corp.'s lines will begin closing from then on until production ceases on Nov. 24.

Ford is better off. Most of its plants have been working short weeks but there have been only scattered layoffs and the company doesn't expect any more.

American Motors and Studebaker-Packard estimate that fresh supplies will reach them before they hit the bottom of their inventories.

As a whole, though, the auto industry will contribute a lot more to the number of laid-off workers before the end of the year.

• **Worse Before It's Better**—In dozens of other industries, it will also get worse before it gets better. One large Philadelphia steel user says: "Layoffs and short weeks will continue well into January. We still have steel, but our inventory is out of balance."

GM's Electro-Motive Div., maker of railroad locomotives, anticipates trouble for an even longer time. For lack of steel it has laid off 1,500 of its 8,200 workers, and it expects it will have to keep production down until next February. Oliver Corp., farm machinery builder, has shut down two of its plants and put a third on three-day weeks.

General Electric, at its Appliance Park in Louisville, Ky., has been laying off employees for short periods, then recalling them for a few more days' production, to conserve its steel

supplies. Now it expects more layoffs in the next couple of weeks.

It's impossible to generalize about the position of these companies and the dozens of others like them that face shutdowns and slowdowns in the next few weeks. Some have run short of almost all the kinds of steel they use. Others have shut down for lack of only one or two different types of steel.

II. How Some Stay Open

It's just as difficult to find a single pattern among those companies that now expect to survive without layoffs and slowdowns.

Businessmen have been trying all sorts of tricks to keep their plants open and their workers together. In scores of cases they have substituted heavier grades of steel for the light sheet steels that are in short supply; they have been trimming steel bars and angles to the shapes they normally use but haven't been able to get.

Some larger companies have kept their own plants open by lending steel to their suppliers rather than have to shut down production lines for lack of one or two components. International Harvester Co., for example, says that from the start of the strike to the end of the month it will have shipped some 5,000 tons of steel to its suppliers.

• **Costly**—Costs have climbed sharply for many manufacturers who have had to buy grey market steel to keep going. They have paid premiums ranging from 30% extra to double mill prices for grey market products. But by now even the grey market has little to offer.

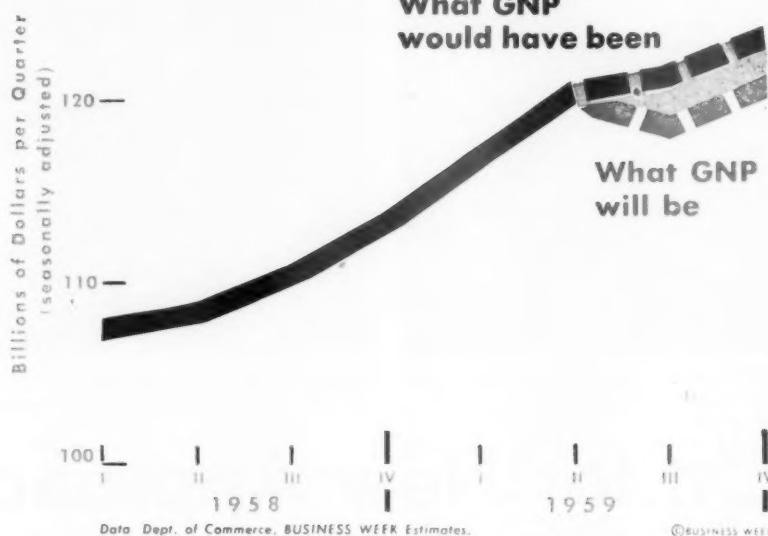
Some say that foreign steel purchases have kept them going. Continental Can Co., for example, used British steel to build up a large pre-strike inventory and assure itself of steel shipments while the strike lasted. And J. I. Case Co., Milwaukee farm machinery maker, is relying on steel from France to tide it over.

Other manufacturers have been swapping steel among themselves, disposing of one type of steel of which they had plenty for another in short supply. And costs have also been boosted for larger companies that have shipped steel from one division's inventory to that of another, sometimes transporting it halfway across the country.

For the next few weeks, it seems certain, they will be employing these same tricks to keep their plants open. In the major industrial centers of the nation, the consensus of businessmen is that the steel shortage will get worse before it gets better.

The Cost of the Steel Strike

130 —



permanently into the economic fabric.

The economic price may be one thing if the net effect of a fight on wage-price escalation proves to be inflationary or if U.S. products become less competitive in world markets. It may be quite another thing if production is made more efficient by annulment of work rules or by wider use of machinery instead of labor.

Cranberry Growers Reel Under Pre-Holiday Blow

The nation's cranberry industry was attempting this week to ward off possible long-term effects of a cancer scare resulting from a federal government statement that amounted to a "don't buy cranberries" warning—just in advance of the Thanksgiving-Christmas season when half the cranberry crop is normally consumed.

At midweek there was still confusion, and several food chains were removing from sales even cranberries from unaffected sources, "until the situation is clarified." Even if, as federal officials promised, a method of identifying contaminated products is worked out and an adequate holiday supply of "clean" berries assured, growers are worried that the effects will long be felt in the markets.

- **Limited**—Actually, what Secy. Arthur S. Flemming of Health, Education & Welfare told a news conference was that residues of aminotriazole, a weed killer that can produce cancer in rats, had been found in some cranberries produced in Washington and Oregon in 1958 and 1959. But there was no apparent way for a consumer to know the origin of cranberry products on sale.

Tests were being made on crops in other growing regions—Wisconsin, New Jersey, and Massachusetts.

Whether aminotriazole would cause cancer in humans has not been determined. George C. P. Olsson, president of Ocean Spray Cranberries, Inc., the co-op that controls the bulk of the nation's crop—with \$27-million sales in its last fiscal year—insisted that a person could not possibly consume enough cranberries to be harmed.

- **Timing**—Aminotriazole, produced by American Cyanamid Co. and Amchen Products, Inc., was licensed by the Dept. of Agriculture in 1958—but only for use after harvest. Apparently some growers used it before harvest, and a residue remained. It was only in May this year that it was established that the chemical could cause cancer in rats. Tests to detect residues were devised within the past month—and as a result, some 3-million lb. from the 1957 Northwest crop, frozen pending the tests, are being destroyed.

\$5-Billion, by One Count

How much did the steel strike cost the U.S. economy?

The chart shows one way to figure it: You measure the difference between actual gross national product in the second half-year and what it probably would have been if a steel labor contract had been achieved without a strike. Figuring this way, BUSINESS WEEK estimates a cost of about \$5-billion.

This estimate takes into account the huge inventory buildup of steel in the first half-year. If the union and the steel companies had come to terms before their deadline, the drawdown of this accumulated supply would have slowed GNP's rate of climb in the second half. The quarter-to-quarter rate of climb—nearly \$3½-billion in the first half—would have been held to something like \$1½-billion in each of the last two quarters.

- **How It Figures**—As it happened, the steel strike took place, and GNP actually dipped by more than \$1½-billion in the third quarter, instead of rising the expectable \$1½-billion. So this loss comes to more than \$2½-billion—the sum of the shift from the plus to the minus side.

In the fourth quarter, with the steel workers back under an injunction, GNP should climb by about \$2-billion. Even a zero rate of inventory accumulation will be better than the third-quarter rate, when industry was living off the shelf; a rise in after-tax personal income will strongly boost personal consump-

tion, and government and business will increase capital spending (BW-Oct. 24'59,p34).

Even so, GNP will make up only half of its rise to the curve it would have followed if there had been no strike. So add another \$2-billion-plus to the previous quarter's \$2½-billion, and round it out at \$5-billion.

- **Opposite View**—There are other ways to answer the question of how much the steel strike cost the economy.

It is possible, indeed, to ask whether the strike cost anything at all. The steel industry itself and most steel-using industries normally run at something less than capacity; some of their employees work less than a full work year. In one sense, the strike merely concentrated into four months the downtime that would otherwise have been spread over 1959 and 1960. Certainly the industry worked at a high level to build steel inventory before the strike, and it will work close to capacity far into 1960 to make up strike losses.

This rationale is most plausible in the case of a short strike—which the 1959 strike was not. But it serves to illustrate the variety of viewpoints that can be taken, and to explain why some of the wisest men at this stage say only that the cost of the strike is incalculable.

- **Yet Unanswered**—For one thing, not all the dimensions of the strike are known yet. Some of the costs will run well into next year; some may be built



REP. WILBUR MILLS would lower tax rates by eliminating special exemptions.



PETER HENLEY, AFL-CIO, backs Mills' plan since low income group would benefit.



HERBERT STEIN, CED, urges new start to allow equal taxation of equal income.

Search Is On for New Approach

House Ways & Means Committee calls in the experts as it attempts to find a simple, yet equitable, method of taxation.

The one thing tax experts tend to agree on these days—and even then they don't agree on very much—is that personal income tax rates are too high.

The first bracket rate of 20% falls too heavily on low income groups—the argument goes—and the higher rates, ranging up to 91%, are excessively harsh and probably depress economic growth.

But the agreement ends the moment experts begin to talk about when and how to cut the rates.

• **Exploratory Hearings**—Next Monday, a major effort to crystallize opinion gets under way under the sponsorship of the House Ways & Means Committee, the originator of all tax legislation in Congress. The committee has no specific legislation to consider; instead it is hunting for a broad new approach to the problem of simplifying the tax system and making it more flexible.

Chmn. Wilbur D. Mills (D-Ark.), has invited more than 80 economists, lawyers, and accountants to give their views of the existing tax law. In particular, they have been asked to explore an idea Mills has been mulling over the past year.

• **Mills' Proposal**—Mills believes the only practicable way of reducing rates is to bring additional income into the tax collector's net. He wants to consider doing this by removing provisions in the law that now allow income to

avoid taxation. These affect every taxpayer: Interest on home mortgages can be deducted, for example; social security payments are tax free; the cost of baby sitters can be written off as a necessary expense for working mothers; oil and mining companies get a depletion allowance. Dozens of such provisions allow some \$55-billion of personal and business income to be excused from income taxes. Eliminate all of them, with the exception of the \$600 personal exemption, and rates could be slashed one-third, witnesses will tell the committee.

Most of the witnesses will be examining this idea in one form or another in hearings that will extend through mid-December.

A preliminary step was taken this week. The committee released a three-volume collection of background papers prepared by the invited witnesses. Staff members believe it is the most comprehensive look at the tax system ever undertaken at the request of Congress. In an effort to achieve as much objectivity as possible, the experts were asked to submit personal views, not the views of groups or organizations they may represent professionally.

• **Political Risks**—Mills and members of the committee know the political risks involved in the study. Even before the background papers were released, Republican House Leader Charles A. Halleck blasted the inquiry as radical in tone, and loaded with questionable proposals.

If this becomes the general Republican position, then the hearings could quickly be turned into a running partisan clash. But Rep. Thomas B. Curtis,

a Republican member of the Ways & Means Committee, publicly scolded Halleck for what he called an "unwarranted prejudgment of the case."

The GOP line probably will be slow in developing and Mills is likely to be given a fairly free hand as long as the inquiry is exploratory only.

• **Conflicting Ideas**—There are three conflicting ideas about the necessary first steps toward rate reduction:

• The traditional view holds that expenditures must be cut first. Roswell Magill, of the Tax Foundation, will speak for this approach in his appearance before the committee. He will defend most of the features of the present tax system except the rates themselves, arguing that Congress should not tamper with the exemptions, deductions, and special forms of relief the law now grants. Among lawmakers in both parties, however, there is a growing belief that expenditures never will be reduced enough to provide the headroom necessary for rate reduction. Mills in particular is discouraged by the long-run outlook for smaller federal budgets.

• Another group argues that growth of the economy will provide additional revenue and growing surpluses, thus allowing a scaling down of rates some time during the next few years. This view is inherent in a report made recently by a Republican task force on economic progress under the general chairmanship of Charles H. Percy, president of Bell & Howell. Mills and other fiscal conservatives in the Democratic Party have about given up on growth as the escape hatch, however. They believe the pressure for additional federal spending will keep



ROSWELL MAGILL of Tax Foundation says spending cut must precede tax cut.

h to Taxation

surpluses at a bare minimum at best, and that substantial rate reduction never can be achieved under this approach.

• There remains the relatively unexplored idea that the best hope is to tax a greater share of existing income. The immediate goal, Mills has instructed the witnesses, is "reduction of rates without sacrificing revenues."

The prospect is dazzling—on paper. Joseph A. Pechman, fiscal expert on the staff of the Committee for Economic Development, told the committee in his background paper that with a comprehensive tax base such as Mills has in mind, personal income rates could be dropped to 14% at the bottom bracket and 60% at the top income bracket with no reduction in revenue.

William F. Hellmuth, professor of economics at the University of Wisconsin, estimated that the corporation tax could be dropped one fifth, from the present 52% to 42.5% without affecting total revenue.

• **Shifting the Burden**—One catch is that a change of this magnitude would result in a massive shift of the tax burden.

Congressional tax experts, and this includes Mills, believe the mass of taxpayers at the bottom of the income scale would get most of the benefit. If so, this would mean that upper-bracket taxpayers—say the top one-fifth with incomes over \$7,500—would be paying that much more. The amount of the shift has been estimated by some students of the problem at \$15-billion. If it should turn out to be anywhere near this size, the conse-

quences could be so far-reaching that Congress may shy away from the whole idea. Certainly it will arouse heated opposition from those who argue that the upper and middle income brackets are already over-loaded.

The political difficulties are enormous. A change of this kind would mean wiping out practically all of the special rights imbedded in the present law, and each of these has its powerful backers. The exemptions, deductions, and advantages for special groups were all adopted by Congress for reasons that seemed convincing at the time—and may well remain convincing if the issues come up again.

Most of the witnesses, however, support the Mills' view that Congress at least should take a serious look at the possibilities.

• **Advocate of Fresh Start**—One of the most eloquent statements in support of a fresh start is that of Herbert Stein, research director of the Committee for Economic Development.

Stein argues that the present system is so riddled with special distinctions and so vulnerable to group rivalries that it has become a prison for policy makers. Congress and the President, he says, are unable to adjust revenues to economic needs because the tax system is overloaded with "fine adaption to special cases."

Instead of expecting the tax law to take care of "every inequity, anomaly, and grievance," he believes it should be geared to some broadly accepted principles of rough justice—such as taxing equally persons with equal incomes. He believes the present system is losing public support, and that it persists "not because we are agreed in support of it but because we are unable to agree on how to change it." Powerful groups at odds over methods, he argues, can block reform as long as the system invites piecemeal distinctions as to how income is to be taxed. In the long run, Stein adds, we "must accept the tax system and not be constantly at war with it." The way to do this, he believes, is to go back to the first principles of what constitutes equity: equal taxation of equal income.

• **Labor's View**—Peter Henley, assistant director of research for AFL-CIO, also supports Mills' basic idea that the tax system would be better off resting on a broader base, with lower rates. He even grants that it would be "sensible and realistic" to reduce the top bracket rates if this is accompanied by relief for low income families.

Most of the academic economists who will appear as witnesses also back up the broad base-low rate approach. Mills has had no trouble marshaling the arguments. The trick will be to convince Congress of the merits of such a system.

Rockefeller . . .

. . . calls for economic growth by avoiding cuts in work weeks; he plays down inflation worries.

New York's Gov. Nelson Rockefeller, an unavowed but active candidate for the Presidential nomination, this week laid out the economic policy on which to run. He took a firm stand beside the ardent economic expansionists and so brought an innovation into the debate on how the U.S. can grow more rapidly and still keep down inflation.

Rockefeller's key proposition: abandonment of further work-week reductions in favor of more production of goods and services.

The governor laid down his basic platform for the economy before a blue-ribbon business forum in New York City, the Economic Club. It was the beginning of a busy week, which also saw Rockefeller head west to appraise further his chances for winning the Republican nomination in 1960.

• **Second Variance**—For the second time in two weeks, Rockefeller put himself in a policy position at variance with the Eisenhower Administration. Last week, it was a call for resumption of underground atomic testing. This week, it was the emphasis on economic growth. Administration policymakers believe the most immediate problem is to combat inflation.

• **Historic Rates**—Rockefeller sees no magic in historic growth rates, nor does he find it vital to choose between a stepped-up growth rate and a campaign to put down inflation. He holds that they need not be incompatible.

"There is no compelling reason why American growth should be fixed at the historic 3% rate, or even at the post-war 4% rate," Rockefeller told the New York business group.

"Since 1930, our average work week has declined from over 48 hours to under 38 hours, or by three and one-half hours every decade. The increase in leisure has been an important social gain, but it has also diluted our production record. Few would urge that we should keep cutting the work week at this rate for an indefinite period. . . .

"If we should decide at any point to forego further work-week reductions in favor of increased outputs of goods and services, this of itself could allow us to realize the full benefit of our almost 3% annual increase in output per manhour. This normal increase in productivity plus a reasonably expectable 2% annual increase in the work force would put a 5% growth rate well within our reach."

• **Fiats Shunned**—In the governor's

economic blueprint, government fiat or federal pump-priming are discarded as a means for attaining the end. In the Rockefeller view, real growth stems only "from increasing the productivity of labor through investing in better machinery and plants."

Rockefeller's comments on the work week prompted a recollection among GOP political sources that Vice-Pres. Richard M. Nixon, during a 1956 campaign speech at Colorado Springs, held out hope of a four-day week "in the not too distant future." Nixon is the man Rockefeller will have to beat if he is to win the nomination.

Rockefeller put down these elements in "a positive, realistic program":

- Tax revision to encourage "savings and investment, initiative and enterprise." In his speech, Rockefeller placed emphasis on more liberal depreciation for capital goods, but his advisers say he also favors some slight reduction in the corporate tax rate and adjustment in the rate of the personal income tax in the upper brackets.

In tenor, Rockefeller on taxes sounds much like Nixon, who made a major tax speech 13 months ago at Harvard University. The governor's advisers acknowledge, however, that Nixon then was much more explicit. Rockefeller's speech, they point out, was designed to cover economic policy in general. They expect more tax statements from Rockefeller in the near future.

- National monetary and fiscal policies designed to moderate the surges of the business cycle, up or down, and adjustment of state fiscal policies, to make them a more useful supplement to federal policies. Rockefeller cites his New York State "pay as you go" plan, which he calls important in helping to "hold down inflationary forces while an economic boom was in the making."

- Reduction of "the drags on our growth." Without being definite, he cites "ineffective phases" of the farm support program, featherbedding in both labor and management, some areas of "government inefficiency," and "certain tariff protections."

- Creation of a national "consultative body" to "face more realistically the problems that come with automation." Rockefeller would have in this group representatives of labor, management, the public, and the Secretaries of Treasury, Labor, and Commerce.

Nixon advisers and friends view the Rockefeller speech as a challenge, but for the most part they reacted in silence. One pro-Nixon source ventured the opinion that "Rocky is naive if he thinks labor and management, through statcraft, will agree to halt the trend toward shorter work weeks. It also occurs to me that he has confused mere production of more goods with increased productivity."



NBC Pres. Robert E. Kintner wants to make the fixing of quiz shows a federal crime.



CBS Pres. Frank Stanton insists it's up to the industry to clean up all deception.

Groggy TV Awaits New Blows

Hearings on fixed quiz shows are just the opening salvo. They may develop into a full-scale investigation of the entire network system.

It now appears certain that the TV probe will take a much wider scope—on all fronts:

Congressional probers began plotting new investigations into television this week as the industry licked its wounds inflicted by the quiz scandals and fresh revelations of bribery.

At midweek, too, the **Federal Communications Commission**—under pressure to "do something"—announced that it would open a broad new inquiry into its powers over programming. Chmn. John C. Doerfer said it would also take a look at granting of licenses to see whether broadcasters should not be held to more precise standards of programming.

Meanwhile, the industry itself was taking stock. Network presidents Robert E. Kintner of National Broadcasting Co. and Dr. Frank Stanton of Columbia Broadcasting System last week wound up the first phase of the probe by testifying before the special House Subcommittee on Legislative Oversight that (1) the networks have been lax in their policing of programs, and (2) something should be done about it.

And advertisers, at their annual con-

vention this week, admitted in a formal statement: "We all of us related to advertising are involved and there is every possibility—yes, probability—that we will become involved even more."

- **Networks on the Stand**—Kintner suggested that Congress pass a law making the fixing of quiz shows or similar types of entertainment a federal crime. He denied any knowledge of rigging until the TV scandals broke, and insisted that he did not learn the whole story until Charles Van Doren—winner of \$129,000 on Twenty-One—confessed his role in the quiz fix.

Stanton—who took the industry by surprise by announcing substantial changes in CBS policy, including the elimination of big prize shows—didn't agree that new legislation is necessary. He insisted that it is the industry's job to clean up any and all deception, whether in programs or commercials. He said that CBS is working with the National Assn. of Broadcasters' Radio Television Code Review Board on the problem of commercials.

Rep. Oren Harris (D-Ark.), chairman of the subcommittee, announced that the investigation will be broadened when Congress meets again. At that



3. SMALL PLANT SAFETY



2. TECHNICAL BOOKS



1. INDUSTRIAL HYGIENE



4. SAFETY POSTERS



5. LOSS CONTROL MAGAZINE



6. EDITOR'S SAFETY SERVICE

"Extras" available to **AM** policyholders at no extra cost!

American Mutual's special safety engineering services help policyholders keep down the cost of Workmen's Compensation.

Backing up every AM Safety Engineer in his vital work of helping policyholders prevent accidents and control losses are these special safety services:

1. TO HELP CONTROL occupational disease . . . a modern laboratory staffed with chemical engineers who analyze toxic hazards—including radioactive materials.

2. TO EDUCATE FOREMEN in industrial accident prevention . . . a series of technical books prepared by AM Safety Engineers.

3. TO HELP PREVENT accidents in smaller and multiple location operations . . . a ten-part correspondence course, "Production Without Accidents in the Smaller Business."

4. TO HELP STRENGTHEN policyholder plant safety programs . . . a monthly service of multi-colored safety posters.

5. TO TELL POLICYHOLDERS about the latest techniques in accident control . . . an authoritative safety publication issued every four months.

6. TO PROMOTE EMPLOYEE SAFETY on and off the job . . . a special series of illustrated safety ideas for use by editors of policyholders' employee magazines.

Add these cost-cutting "extras" to the savings opportunities through AM dividends (policyholders received nearly \$8,500,000 in 1958) and it gives you good reason to talk to the friendly AM man now. (He can advise you on all your casualty insurance needs.) American Mutual, Dept. BW-16, Wakefield, Mass.

American Mutual



LIABILITY INSURANCE COMPANY

"The First American Liability Insurance Company" . . .
a leading writer of Workmen's Compensation, all forms of Liability, Crime, Accident and Health Insurance.

time, the probers will look into the alleged commercial bribery—so-called payola—of disk jockeys, producers, and network employees to plug music and products on radio and TV.

• **Plugs**—This phase of the probe was assured when testimony revealed that Max Hess of Allentown, Pa., had paid \$10,000 to help an employee of his department store get on the \$64,000 Question show. Hess also stated that he had made many payments to get advertising "plugs" on TV shows.

Stanton told the committee: "This is a miserable situation and it is deplorable."

The plug, or mention placement, business has developed into a fine art on TV. Plugs go for set rates—\$250 for a station mention, \$350 for mention on a network. Blocking out a competitor's mention runs even higher. For example, several years ago a brass fittings manufacturer got word that a TV show would display aluminum fittings for lights. The company bought out the mention, had brass fittings substituted.

Shows that offer merchandise prizes operate on a somewhat different system. The "sponsor" delivers a product to the TV station. The show's packager gets a certain number of additional pieces to retail as he pleases.

• **Recommendations**—The investigating committee is scheduled to meet Dec. 9 to determine its future course. Commercial bribery is sure to be on the list, and the industry obviously fears that the probe will develop into a full-scale investigation of the entire network system. Rep. Harris implied as much when he cautioned Kintner that if the industry does not police itself it faces stiff government controls.

• **It's Up to the Industry**—The likelihood of any comprehensive changes in the structure of broadcasting and advertising rests with the industry itself.

The stand that advertisers are now taking on the issue of deceptive commercials and programs may portend some changes in relationships between advertisers and the industry. A 14-hour session of the ANA in Hot Springs, Va., brought forth this statement:

"It is our responsibility to see that every aspect of television with which we are connected meets our obligation of fair play to the public."

Donald S. Frost, a vice-president of Bristol-Myers Co. and new chairman of ANA, put the position of the advertisers' group more bluntly: Either clean up or give up. Frost established this test as a criteria of all material sponsored by advertisers: "Would we be willing for the public to be fully apprised of all the facts and circumstances concerning the particular program or commercials?"

• **Problem of Control**—Actually, the problem of advertiser control and influ-

ence over programs is tougher than it appears. It was debated at the ANA meeting. Edwin W. Ebel, General Foods Corp. advertising vice-president, made it plain that to achieve a magazine-type system of TV advertising, networks would have to share some of the program risks the advertiser now takes.

Unlike other advertising media, TV sells specific time periods to advertisers on the basis of a merely potential audience in particular markets at particular times. With other stations competing for the same audience at the same time, advertisers want to be certain that their program reaches the widest audience possible—for no matter what the audience, the sponsor pays the same.

Newspapers and magazines, on the other hand, sell advertising space on the basis of a guaranteed, independently audited circulation. It becomes the publisher's problem to provide editorial matter that will attract the circulation he guarantees to deliver. Although an advertiser is profoundly concerned with the over-all editorial quality of the media he selects, he does not have the incentive he now has on TV to influence each individual item.

TV audience rating services attempt to measure audience size, too, but only after the fact. Thus, said General Foods' Ebel: "Under the present method of television programming, the advertiser takes the financial risk. If the networks are to take over show selection, then we would want certain guarantees (concerning the size of the audience) we do not now have."

• **Pattern Changes**—Stanton reiterated the statement he made when the TV scandals first broke that CBS is taking a "fresh, hard look at our basic operational theories and practices as they affect the whole pattern of everything that appears on the CBS television network—and I mean everything."

Out of this re-evaluation, a CBS insider says, could come some fundamental changes in network programming affecting advertiser and producer relations with the network.

• **FCC's Belated Stand**—To most observers, FCC's decision to move into the picture is long overdue. In 1956, the Senate communications subcommittee asked both FCC and the Federal Trade Commission to figure out how much authority they had respectively over advertising, program balance, and prevention of misleading advertising and over commercialization of the medium.

Not until the national scandal erupted did either FCC or FTC respond to this. FTC was given \$250,000 in 1956 to set up a monitoring system for radio-TV commercials. Last week FTC Chmn. Earl Kintner announced that the agency would really push its monitoring.

By the time either agency had got serious, the Justice Dept. had already jumped into the act. Justice is now conducting a fast study to see which agencies have statutory authority over what aspects of broadcasting.

• **Defense**—Doerfer has told the House committee that he believes FCC has virtually no authority over programming. Applicants for licenses are required to spell out their programming plans—but they aren't held to them after they get a license. No license has ever been revoked for bad programming, and Doerfer feels any such revocation could be challenged on constitutional grounds of "censorship." He points to a 1954 Supreme Court decision overruling FCC's interference with giveaway shows. Some commission members, however, feel that FCC's broad responsibility to protect the "public interest" has to include programs.

• **Forerunners**—FCC's belated study won't be the first analysis of what's wrong in the broadcasting industry, but previous probes, including the exhaustive study known as the Barrow Report, have evaporated in lethargy.

This report, headed by Dean Roscoe Barrow of the University of Cincinnati, made 10 major recommendations in 1957 for basic changes in the structure of broadcasting (BW-Oct. 12 '57, p113). Only three of the less significant ones have seen any action. The networks voluntarily dropped "must buy" practices whereby network advertisers had to buy time on a minimum number of stations. Only a few weeks ago networks were ordered to stop soliciting national advertising except for stations they owned. And FCC is now planning to cut "option time"—the amount of local time a network may command—from three to 2½ hours prime time daily.

But the major recommendations, the ones that would affect the basic pattern of ownership and control, have not been touched. They include licensing of networks which is finally getting serious consideration, providing penalties short of revoking a license, reducing the number of stations one owner can have, giving FCC a say in resale of existing stations, requiring networks to publish rate-making procedures, devising rules for network affiliation, and making a study of network radio.

• **Limp Support**—Some of FCC's lethargy is Congressionally induced. Congressmen are reluctant to take on the broadcasters. Moreover, some congressmen hold interests in radio or TV stations. These include Senate Majority leader Lyndon Johnson and Commerce Committee Chmn. Warren Magnuson (D-Wash.). Chmn. Oren Harris of the House Commerce Committee sold his interest in a radio station when he undertook the broadcasting probe.



TWENTY-TON LOAD aboard trailer fails to bother multiwall sack made with CLUPAK kraft. Patented, built-in stretch absorbs shock as wheels pass completely over. Sack contains 100 pounds of abrasive sand-blasting grit, found difficult to package prior to use of CLUPAK paper multiwalls.



NAIL SHAKE-UP test shows how CLUPAK paper resists puncture. After two minutes, ordinary bag resembles porcupine, but only two nails have penetrated tough, flexible CLUPAK paper.



MAIL GOES THROUGH without complaints when the wrapper is CLUPAK kraft. Leading magazines find tough, flexible CLUPAK paper survives rough handling far better than ordinary kraft wrap.

NEW PAPER WITH REVOLUTIONARY "TOUGHNESS" MAKES PAPER VIRTUALLY A NEW MATERIAL

ABSORBS SHOCKS INSTEAD OF TEARING! CLUPAK Extensible Paper opens a new era in paper . . . its applications are unlimited. For CLUPAK paper has a built-in *stretch* or extensibility which lets it absorb the shocks and strains that cause ordinary paper to rip, tear and puncture. The result is a new dimension in paper—*toughness*. And the greater *flexibility* of CLUPAK paper is important where folding, bending, wrapping or filling is involved. Already CLUPAK paper is giving multiwall sacks, grocery bags, asphalt and decorative laminates, protective bags, polyethylene coated papers and many other products better performance, often at lower cost.

KEY FACTS FOR BUYERS: CLUPAK kraft is the same as ordinary kraft except that it is stronger, tougher and more flexible. It can be made in many basis weights, and with varying degrees of stretch. Printability, surface friction, porosity and other properties can be controlled as with ordinary paper. Clupak, Inc., does not make paper. It carries on continuous research and development work, and results are made available to all licensees, listed below. **Clupak, Inc., permits use of its trademark only on paper which meets this company's rigid toughness requirements.** Clupak, Inc., 530 Fifth Avenue, New York 36, N. Y.

BE SURE TO LOOK FOR THIS TRADEMARK



*Clupak, Inc.'s trademark for extensible paper manufactured under its authority.

Buy CLUPAK paper and products made with CLUPAK paper from:

Albemarle Paper Mfg. Co.
Cascades Paper Co.
Canada Paper Co. (Canada)
Crown Zellerbach Corp.
Continental Can Company, Inc.
Dynes Aktiebolag (Sweden)

Hudson Pulp and Paper Corp.
International Paper Co.
St. Lawrence Corp., Ltd. (Canada)
St. Regis Paper Co.
Union Bag-Camp Paper Corp.
West Virginia Pulp and Paper Co.

In Business

Pentagon Studies Direct Launching Of ICBM's From Underground Silos

The Pentagon has ordered test facilities for a new concept in underground, or "hardened," bases for launching ICBMs.

Ralph A. Parsons Co. has been awarded a contract at an estimated \$300,000 for an experimental Titan base in which the missiles would be launched directly from underground silos. It is estimated that the whole project may run up to \$2.2-million.

Hitherto, the "hardened" base concept has called for storage of the missiles underground in a vertical position. They would then be hoisted by an elevator for firing from a surface pad. And the first ICBM bases have been planned as "soft" installations entirely on the surface, with the missiles kept in the vertical firing position all the time.

To speed the experimental project by Parsons, the Army has granted a cost-plus contract, instead of the usual fixed-price basis.

New Jersey Weighs Lefthanded Subsidy To Reanimate Commuter Railroads

New Jersey may make one more attempt to get its commuter railroads out of the morass of deficits in which they've been threatening to drown.

Last week, in a referendum, the state's voters rejected a legislature-approved plan to subsidize the commuter lines with the excess earnings piled up by the rich and successful New Jersey Turnpike (BW—Jun. 20'59, p.38).

This week, Wesley Lance, the State Senate's president, put up a plan by which the state would contract with the lines for their services—a roundabout method of subsidization. To help pay the cost, he suggested, the state could use \$4-million the roads pay in taxes.

Meantime, the roads, through the Assn. of Railroads in New Jersey, say they're no longer bound by promises to keep services going, which they made when the turnpike-subsidy plan seemed assured of approval.

U.S. to Buy No More Canadian Uranium, But Will Stretch Out Old Contracts

Canada's \$300-million-a-year uranium industry has failed in its clamor for a reprieve. The U. S. government will give it no new orders; it has been buying 85% of Canada's production, but now is yielding to the demands of U. S. producers that it do its buying at home.

As a partial sop to Canada, the U. S. has agreed to stretch out delivery times on existing contracts so that they will terminate at the end of 1966, instead of in

1962-63. But the amounts of the deliveries remain the same, and by the end of this year half of Canada's uranium capacity will be shut down, with 7,000 out of 14,000 miners out of work.

Tobacco Heir's Tiny Airline Links His Island Home to Main Line Airports

Tobacco heir Richard J. Reynolds has set up an airline of his own—a line so tiny that it is really more a taxi service. His Golden Isles Airlines will run four trips a day between the main line airports at Savannah and Jacksonville, with offshore stops at Sea Island and Sapelo, which is Reynolds island home. The line hopes to be allowed an additional stop at Fernandina Beach, Fla. For any friends of Reynolds who might want to drop in on Sapelo the line will be a great convenience.

Business Briefs

The state "fair trade" law in Washington was upset by the state Supreme Court, which found the non-signer clause invalid. The case involved a suit by Remington Arms Co. seeking to stop the Pay Less drugstore in Spokane from selling guns and ammunition below the prices set by Remington in contracts with other stores.

New York's Mayor Wagner, rebuffed by the voters in his effort to raise money by school bonds, has returned to his old fiscal love: the legalization of off-track betting. The state legislature rejected his first off-track betting bill with its estimated take of \$100-million apiece for city and state (BW—Feb. 28'59, p.32); the new bill estimates the take at \$200-million apiece.

The Air Force this week awarded contracts for development of the Dyna-Soar manned space ship that will be blasted into orbit by a ballistic missile. Boeing will design and build the vehicle; the Martin Co. will produce the rocket launcher.

The Supreme Court this week refused to consider charges by three electric utilities that their ability to borrow money is being hampered by the circulation of an opinion on tax procedures by the American Institute of Certified Public Accountants (BW—May 2'59, p.25).

The Federal Trade Commission has ordered Eric Sand & Gravel Co. to sell the assets it acquired in 1955 by buying out the competing Sandusky Div. of Kelley Island Co. FTC says the deal violates the Clayton Act with a near monopoly in domestic sales of lake sand.

A federal appeals court in Philadelphia has ordered the Federal Power Commission to O. K. the piping of 52-million cu. ft. a day of Texas gas to New York's Consolidated Edison by Transcontinental Gas Pipe Line Corp. FPC had said that Con Ed planned an "inferior use" (firing boilers) for the gas; the court held that FPC could not regulate the end use of the fuel. An appeal to the Supreme Court is likely.



Machine Tool Buyers:

Beware the fallacy of the "Rate of Return on Investment" formula

Many capital goods replacement decisions are based on a formula known as "rate of return on investment".

The following example underscores the risk of management's arbitrary selection of a "desired" return.

Hypothesis

- (1) Management Objective — 15% Return
- (2) Cost of New Equipment — \$100,000
- (3) Savings Now — \$10,000 Per Year (10%)
- (4) Projected Increase in Savings Each Year — \$1,000

Decision

Postpone Replacement for 6 Years when savings of \$15,000 will be attained.

Result

Avoidable Costs Incurred: First Year — \$10,000; Then \$1,000 More Each Year — A total of \$75,000 After 6 Years.

Secondary Result

Projected Cost of Equipment in 6 Years — \$145,700. Postpone Replacement for 6 More Years. *Ad Infinitum.*

Does Jones & Lamson offer a positive approach; a realistic, workable formula that is free from fallacies such as this?

Yes! Write today for complete information.



JONES & LAMSON Machine Company, 503 Clinton St., Springfield, Vt.

Turret Lathes • Automatic Lathes • Tape Controlled Machines • Thread & Form Grinders • Optical Comparators • Thread Tools



...NEWS IS HAPPENING AT NORTHRUP.

THIS IS A SPACE SUIT

How Norair Management Answers Space Age
Problems New Ways—at Far Less Cost

Like his scientific colleagues in their men-from-Mars uniforms, the Norair man in his business suit is making breakthroughs that close the gap that separates us from Outer Space. His breakthroughs in management techniques bring the impact of efficiency to finding new and better ways to create space age advances at less cost.

Norair men continually research and improve their own methods at all levels of operation. They integrate efforts from manufacturing, engineering and management. They apply their own unique Northrop methods like PACE (Performance And Cost Evaluation), Target Cost Control, Value Analysis, and Machine Utilization to push the learning curve ever steeper.

With the help of suppliers and associates, Norair can produce anything in the space/aircraft field that the mind of man can devise. But Norair is not content to rely on its vast capacities and capabilities simply to get the work out on time. Management takes the advanced step, because it knows that its profits come, not through charging the customer more, but through reducing costs. Going beyond standard management procedures, Norair brings new techniques, new methods, new thinking to all areas to deliver new and more effective capabilities to answer the problems of superior Free World defense in the space age — at minimum cost.



NORAIR

A Division of **NORTHROP CORPORATION**
Hawthorne, California

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
NOV. 14, 1959



Labor is in no hurry to re-weld its alliance with the Democrats—not on formal terms, anyway. The alliance cracked during the past term of Congress, with passage of the Griffin-Landrum reform bill.

Walter Reuther tries a reconciliation, finds the going tough. The bulk of organized labor's money and effort will be on the Democratic side in 1960 campaigning, but most union chiefs are unenthusiastic. And they are leery of anything that looks like an advance commitment. At stake: their political bargaining power in Congress between now and election time.

Two major political resolutions promoted by Reuther died aborning this week at the AFL-CIO's Industrial Union Dept. convention in Washington. They would have said, in effect, that labor is ready to forgive its Congressional friends who, out of fear of something tougher, voted for the Griffin-Landrum bill. The resolutions committee killed them both.

— • —
Backers of Sen. John F. Kennedy were especially disappointed. The young Massachusetts senator, current leader in the tightly packed field of Democratic Presidential contenders, had a big role in the labor reform fight during the last session of Congress.

Kennedy would be the chief political beneficiary of any AFL-CIO resolutions specifying or implying forgiveness. Anti-Kennedy sentiment runs high in some labor circles.

The reason for the Kennedy camp's disappointment: Due to his efforts to get softening compromises into the Griffin-Landrum bill, so the figuring goes, their man made no friends on the political right. Now they reason that he is entitled to at least a few kind words of understanding from the political left.

— • —
Republican hopes for big gains in Congress next year, not very bright to begin with, dimmed a little more this week.

Trouble down on the farm is the reason. All week long, there was a trickle of official Agriculture reports. In the view of the professionals directly concerned with trying to elect Republicans to the Senate and House, they added up only to bad political news.

The big item: declining farm income. Net agriculture profits for 1959 are officially estimated at \$11.2-billion, down 14% from 1958. Experts calculate that the slide will continue through election time in 1960.

Agriculture Secy. Benson stands firm, with Eisenhower squarely behind him, on demands that the Democratic Congress take responsibility for the basic farm crisis. The Benson-Eisenhower approach, reaffirmed this week, is that farmers should be led to produce for the market, rather than for the storage bins.

Government's surplus crop investment heads toward \$10-billion, a fact Benson thinks may finally force legislative action next year. But the feeling here is that the Secretary is overoptimistic.

Politics is the dominating factor, and the Democrats see partisan gain in opposing the Benson program—which would require a first-step cut in the federal price supports and would shake out many marginal farmers. In wheat, today's worst problem, federal guarantees would drop from \$1.77, the current level, to about \$1.40 per bushel. GOP professionals don't argue the merit of Benson's plan, but they feel it costs more votes than it wins in rural America.

WASHINGTON OUTLOOK

(Continued)

WASHINGTON
BUREAU
NOV. 14, 1959

Fresh Midwestern reports do not encourage GOP strategists. North Dakota, whose maverick Republican Sen. William Langer died this week, is put down as doubtful territory. And from Kansas the word is that Sen. Andrew Schoeppl, a veteran Republican who has supported Benson, faces an uphill fight in 1960 against Democratic Gov. George Docking.

Mathematically, there is little practical chance that Senate control could pass to the Republicans in 1960. And if reports from the field indicate a real trend, they mean that the GOP will fall far short of its goal of regaining House control. Big Midwestern gains in House races would be essential to that goal.

Republican optimism about the Presidency continues high. The feeling persists that a Republican can and will win the White House.

— • —

California's Sen. Thomas H. Kuchel stands to gain new influence next year in the Republican Congressional hierarchy.

GOP Senate leader Everett M. Dirksen will have to slow his pace. The Illinois senator emerged from the last session of Congress near exhaustion and has been under a doctor's care. This week, two months after adjournment, Dirksen went to Florida for further recuperation.

Dirksen is expected to keep the title of minority leader, a post from which he functions as Pres. Eisenhower's chief spokesman in the Senate. But more and more of the actual leadership duties will be passed to Kuchel, the Republican whip. Kuchel is 49; Dirksen, 63.

Kuchel is a liberal, while Dirksen is a conservative, according to most GOP definitions. This distinction, however, was truer before the last session, when both moved up to leadership positions for the first time.

The differentiating labels persist, but they are pertinent nowadays only to minor legislative issues. Last session, Dirksen and Kuchel worked together hard and consistently for major Administration policies. Both support Vice-Pres. Nixon for the 1960 Presidential nomination.

— • —

The U. S. will build a giant new radar outpost in Britain. Part of a net known as BMEWS—for Ballistic Missile Early Warning System—it will cost several hundred million dollars and will be powerful enough to detect missile launchings 3,000 mi. away, in the deepest Soviet interior. A site on the English east coast, near the Scottish border, is being negotiated now. The Pentagon expects before Christmas to announce details of that installation.

Two similar radar stations in Greenland and Alaska are already under construction, scheduled for completion in mid-1960 and mid-1961. Work on these is being spearheaded by an industrial team including RCA, Western Electric, General Electric, and Goodyear Aircraft.

— • —

A study of the economic implications of disarmament—if and when—is temporarily sidetracked. The Senate Foreign Relations sub-committee on disarmament probably will get around to the study eventually, but it may be next spring or later. As of now, there is no time, agenda, or witness list for any such inquiry.



PLEXIGLAS

...for lighting that stands out and stands up



Sixteen 4' x 4' pan-type diffusers of white translucent PLEXIGLAS® are used to light the striking new branch office of Mechanics National Bank in Levittown, N. J. Architect: Clifford Germer.

Handsome buildings deserve the *best* in lighting, and they get it when lighting equipment includes diffusers or lenses made of PLEXIGLAS® acrylic plastic. PLEXIGLAS provides highest efficiency in transmission and diffusion. It is rigid, with a smooth, easily cleaned surface. Above all, it is a *durable* material—highly resistant to breakage, and free from discoloration even after years of exposure to fluorescent light.

We will be pleased to send you the names of manufacturers whose lighting equipment is based on the use of PLEXIGLAS.



Chemicals for Industry

**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

In Canada: Rohm & Haas Company of Canada, Ltd., West Hill, Ontario



Where a Texaco Engineer hangs his hat

Where there's a job for lubricants, that's where a Texaco Lubrication Engineer hangs up his hat and goes to work.

Maybe he's helping an airline evaluate engine performance. Maybe he's lending his know-how to the machining of tougher-than-tough alloys... or working overtime to help a contractor complete a mammoth construction project ahead of schedule. Whatever the job, the Texaco Lubrication Engineer has just one objective: to keep machinery running smoothly, to prevent delays in production, to

help you reduce your maintenance costs.

Every dollar a Texaco Lubrication Engineer helps you lop off your maintenance costs is a dollar you can add to profit!

Remember that when you're looking at your profit and loss statement. Let Texaco bring your firm the benefits of Organized Lubrication. Send for the eye-opening book: "Management Practices that Control Costs via Organized Lubrication." Texaco Inc., 135 E. 42nd St., New York 17, N. Y., Dept. B-122



LUBRICATION IS A MAJOR FACTOR IN COST CONTROL



CUBANS RALLY in Havana to protest "bombings" by planes Castro said came from U.S. Anti-U.S. campaign is increasing as . . .

Castro Plays from Desperation

Support from armed forces and educated classes wanes, economic problems mount.

Premier Fidel Castro's revolution in Cuba has entered a new and even more chaotic phase. Caught in a cross-fire of economic troubles, Communist infiltration, defection of high-ranking officers, and general unrest, Castro is using every trick possible to keep his one-man government going.

In an effort to find a scapegoat, the Cuban leader has whipped up a violent anti-U.S. campaign. As a result, many top U.S. companies with a sizable stake in Cuba's future are getting hurt. Some U.S. companies, though not the biggest ones, are beginning to pull out.

• **Opposition Grows**—Opposition to Castro's rule is growing among Cubans. It has reached the point where some close observers in Havana are beginning to wonder whether Castro can stay in power much longer. Castro, of course, can still claim popular support from an estimated 80% of Cuba's 6-million people. But support from the armed forces and the educated classes is dwindling. These are the groups that traditionally have played a pivotal role in Latin American revolutions.

What bothers these groups most is Castro's toleration of Communists and extreme leftists in both the government and army. Such top military com-

manders as Major Hubert Matos, devoted follower of Castro, have resigned because of disillusionment with their leader's purported Communist leanings. The business and professional classes, though convinced of the need for economic reforms, also are becoming disillusioned with Castro's reckless, often radical economic measures, especially his land distribution program.

• **Scapegoat**—Castro's recognition of mounting discontent evidently is what triggered his anti-U.S. campaign. Taking a leaf from the textbook of Latin American dictators, he diverts attention from problems by railing against the "Americanization" of Cuba.

But Castro's anti-American line is simply aggravating earlier economic troubles. After he toppled Batista, the important tourist industry-dependent on U.S. customers—went dead. Though it began to revive three months ago, now any travel agent will tell you: "Don't risk vacationing in Cuba." Similarly, U.S. investment stopped after the January revolution. By mid-summer, it was beginning to revive (BW—Aug. 1 '59, p70). Today, most companies planning investments have stopped short in their tracks.

• **A Few Gains**—In some ways, of course, Castro has brought improvements over Batista's regime. He clearly has eliminated wholesale graft at the top level. He has knocked out most gambling—and as a result workers are

spending more money on such consumer goods as beer and soap.

But Cuba's economy is skidding downhill—if statistics give any kind of accurate picture. Take unemployment. It is running at 332,000, out of a 2.3-million work force. And that doesn't include the 345,000 sugar workers laid off seasonally.

• **Ineffective Package**—The root of the trouble is that while Castro's individual reforms often seem to make sense, they are not working effectively as a package. Take his program to reduce imports of luxury goods and thus save foreign exchange. Imports have dropped 37% compared to a year ago. But export earnings have dropped, too—mineral exports, for one, are down 89%.

The government can point to a 25% boost in revenue. But that's a temporary gain. Most of it comes from collection of \$100-million in back taxes. Or take another example—construction. Castro passed a law cutting rents. That was part of his program for leveling out Cuba's rich and poor classes. But now hardly anyone wants to invest in new building. Construction is down 68% compared to a year ago.

• **Economic Planning**—In Castro's economic scheme, top power now rests with the National Agrarian Reform Institute (INRA)—the new agency directing the massive land reform program. To redistribute land to the "guajiros" (peasants), INRA is putting its fingers

For what it's worth...

Factors affecting fair market value

from the Clients' Service Bulletin of The American Appraisal Company

In any appraisal to establish the fair market value of an industrial or investment property, all factors influencing the amount a willing buyer and a willing seller would agree upon as a fair price should be considered. These factors include earnings, sales of comparable properties, the cost of reproduction less depreciation and analysis of any patents, good will or other intangibles involved.

Replacement approach

Book values are usually reliable for determining the value of net working capital items but are rarely indicative of the value of the fixed assets used in the business. The cost of reproduction less depreciation, both physical and economic, is usually an important factor, as this represents the desirability of the existing facilities in comparison with the acquiring of new property. Careful consideration must be given in such valuation to location, arrangement and character of facilities in comparison with those currently available.

The effect of earnings

A buyer is usually interested in paying for tangible assets up to the amounts that are warranted by a fair return. If, however, past and future earning prospects are in amounts inadequate for a fair return on the working capital and the plant assets, the purchaser will undoubtedly discount the values indicated.

If the property for sale is a profitable going business with earnings in excess of that necessary to provide

a fair return for working capital and plant values, the purchaser may be willing to pay for good will or other intangibles based on a capitalization of the excess earnings.

★ ★ ★

Whatever the appraisal need—whether for purposes of purchase or sale, accounting, taxes, insurance or property control—an American Appraisal provides authoritative information...supported by detailed factual data...interpreted in accordance with valuation principles tested by more than 60 years of experience. That is why thousands of firms, large and small, depend on The American Appraisal Company for appraisals that command respect and win acceptance.

The AMERICAN APPRAISAL Company

SINCE 1896...LARGEST...MOST WIDELY USED

Home Office: Milwaukee, Wisconsin

Atlanta	Cincinnati	Kansas City	Philadelphia
Baltimore	Cleveland	Los Angeles	Pittsburgh
Boston	Dallas	New Orleans	St. Louis
Buffalo	Detroit	New York	San Francisco
Chicago			Washington

Affiliated: Canadian Appraisal Company, Ltd.
Montreal and Toronto

The American Appraisal Co., Dept. BW
525 E. Michigan St., Milwaukee 1, Wis.

Without obligating me, please send me your periodic Service Bulletins which discuss valuation problems.

Name.....

Firm.....

Position or Title.....

Address.....

City..... State.....

into almost every sector of the Cuban economy. The man recently appointed to run the "industrialization" side of INRA's program is Major Ernesto Guevara—a sharp-minded Castro follower who likes the Soviet Union almost as much as he hates the U.S. Many Havana observers think that in the long run Guevara's word will carry more weight than the whole battery of professional economists and bankers who technically blueprint the new economic reforms.

Mostly to further INRA's aims, the government has been pushing through new mineral and petroleum laws. The mineral law, among its many tough clauses, slaps a 25% tax on ore exports. Considered virtually "confiscatory" by some foreign businessmen, this law is also leading to expropriation of U.S.-held concessions. Sample targets: Bethlehem Steel, which owns ore concessions, and Moa Bay Mining Co. (subsidiary of Freeport Sulphur), now investing \$75-million in nickel-and-cobalt production.

As prelude to a petroleum law, Castro's agents swooped down on private companies, seized their files. As much as anything, the law probably will aim at getting land quickly to hand out to peasants for farming.

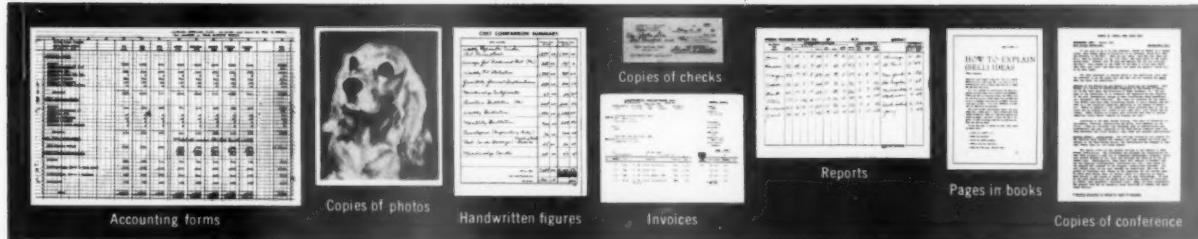
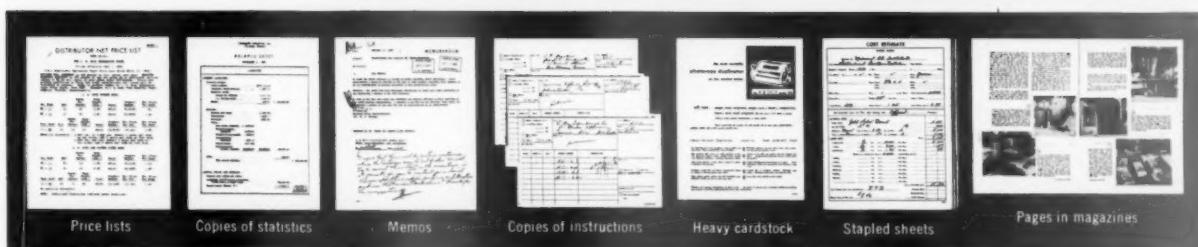
Castro's main target, of course, is sugar land. So far, INRA has only "intervened" on some properties run by United Fruit Co., Cuban-American Sugar Co., and other U.S. cane growers. The big grab for full control probably will take place soon after harvesting of the 1960 crop begins.

• **Ultimate Goal**—The government's goal—say some Havana observers—is not simply the redistribution of land and the formation of "farm cooperatives." (No land, incidentally, has been handed to peasants on an official basis, as yet.) It's socialization of practically all the island's industry.

INRA already has usurped most of the work done by the Agriculture Ministry. It controls the egg, tobacco, and cattle industries—and gradually is moving in on other industries.

What alarms U.S. observers most—and some important Castro followers as well—is the rising Communist influence in the government. Red penetration reportedly is extensive in towns and military circles in central and eastern Cuba. Communists also are gunning for the labor unions, though they don't seem to be in control at this week's big union convention.

• **Castro's Sympathies**—In judging Castro's freewheeling attitudes, observers believe that the rebel leader has no great liking for Communists—as such. The Communists are primarily a useful force to offset the longstanding, dominant role that the U.S. has played in Cuban affairs over the past 60 years. END



Copies anything... Copies everything

Only the New A. B. Dick Photocopier, Model 110 handles all your photocopying requirements . . . not just part of them! No brown, muddy, flimsy copies here . . . copies are sharp, jet-black on bone white, or on any of 5 eye-ease colors (ideally suited for color-keyed systems work). Copies anything printed, typed, duplicated, written, drawn or photographed. Even copies pages in books or magazines, colored originals, diazo prints, 2-sided originals, transparencies.

New Multi-Copy Process makes repetitive copies faster, easier and with new economy! New Multi-Copy Process produces more than one copy from a single exposure, lets you make several copies.

Call your A. B. Dick Company distributor, listed in the yellow pages, for information or a free demonstration. Or mail coupon at right.

A·B·DICK®

Achievement through Innovation

**A. B. Dick Company,
Dept. BW-119
5700 West Touhy Avenue,
Chicago 48, Illinois**

Please send me information about the NEW A. B. Dick Photocopier, Model 110 and NEW multi-copy process.

NAME _____

POSITION _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Middle East Tunes In on TV



FAIRY TALES based on Middle East folklore make up many of the children's programs. But, as in the U.S., the young guy's fare is liberally sprinkled with cartoons.



EDUCATIONAL programs, such as lessons in Arabic language, are telecast from Aramco's studios in Saudi Arabia. Other shows give cooking and fire prevention tips.



LOCAL TALENT features the "stars of tomorrow." In most of the Middle East, TV is devoted to entertainment; only in Iraq has it been turned into a propaganda weapon.

The stations are short of everything—advertising revenue, technicians, program directors. But the people are buying sets.

Two years ago in Lebanon, the cooch dancer in the picture (right) could be seen only in a night club in Beirut. Today, with the advent of a television industry, she is undulating her way into living rooms throughout the city.

Lebanon, Iraq, Iran, and Saudi Arabia all have TV stations and are planning for more. The United Arab Republic has just let contracts for two stations. Unlike radio, which is strictly controlled by governments and used extensively for propaganda (BW-Mar. 16 '57, p47), television in these countries is devoted largely to entertainment, with just a little education and propaganda thrown in.

- **Ownership**—In the Middle East, TV is considered more a commercial venture than a government enterprise. Stations in Iran, Saudi Arabia, and Lebanon are privately owned and mostly financed with advertising revenue. The proposed stations in the U.A.R. will be government-owned but will pay their own way with advertising. Only in Iraq is television operated by the government as a propaganda medium. Elsewhere, politicians consider TV's broadcasting range too short and its viewers too sparse.

- **Sales Picture**—Television in this part of the world is young and not very good. The stations are short of everything—technicians, program directors, live talent, canned shows, sponsors, and commercials. But there's evidence that TV eventually will prosper in the Middle East.

Sales of TV receivers are doing well, considering the relative poverty of Middle Easterners. The comparatively small middle class is buying most of the sets, but some installment credit allows a few low-income people to own a screen.

In Tehran, there are about 16,000 receivers, and sales are moving at 1,000 a month. Beirut has 6,000, with sales at the same rate as in Tehran. In Saudi Arabia, where Arabian American Oil Co. has set up a station for its employees—14,400 of whom are Arabs—about 3,000 nonemployees in the neighborhood have sets.

Most of the sets are imported. In Tehran, 40% are RCA models, with a smattering of Japanese, Hungarian, and Russian receivers just hitting the market. British and German sets are also coming in, and a Japanese group



EXOTIC DANCER, usually seen only in the sophisticated night clubs of Beirut, appears on the Arts and Melodie Show.

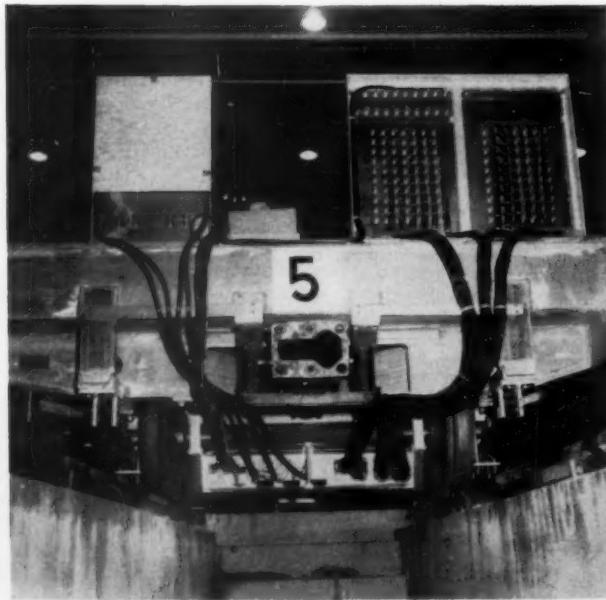
Operated by Lockheed for the U.S. Air Force: America's unique nuclear radiation test center

USAF's Nuclear Laboratories—a unique facility for the investigation of nuclear effects on articles used by the Department of Defense in the nuclear age and in space exploration—are located on a huge tract of isolated woodland near Dawsonville, Georgia.

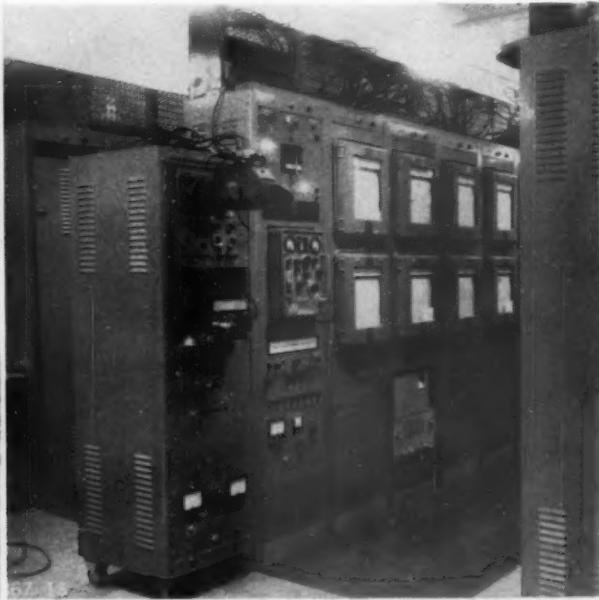
The heart of this \$15 million facility is an air-shielded 10-megawatt reactor. It can irradiate six flatcar loads of complete operating subsystems or vehicle components simultaneously, in actual operational environments.

No other facility in America can perform and evaluate radiation tests on complete operating subsystems with the thoroughness, the accuracy, or the speed that is possible at Dawsonville.

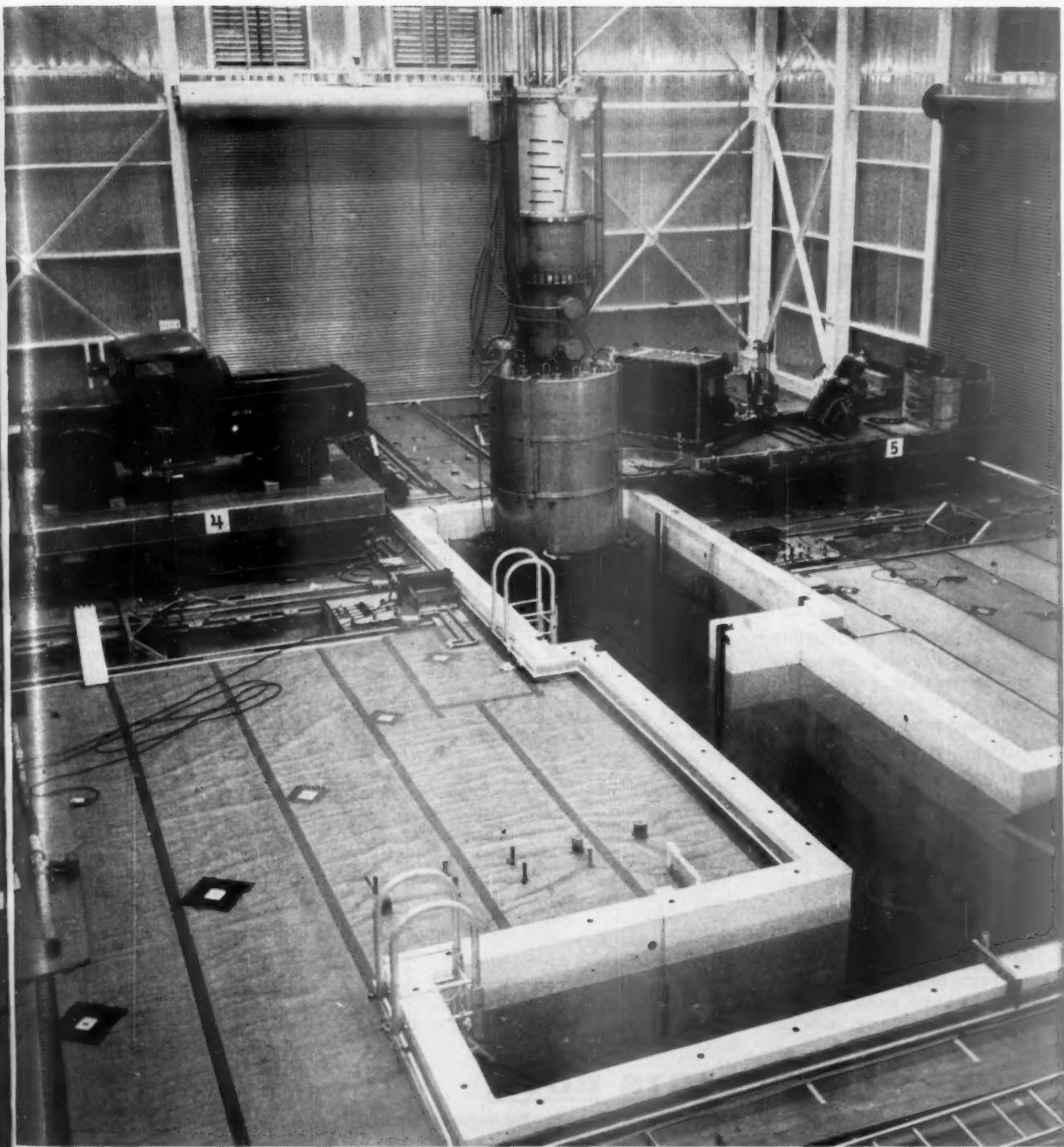
And because of its vast area—almost 20 square miles—the Dawsonville site makes unlimited expansion possible. It will support several other nuclear installations, at costs drastically lower than building them elsewhere.



1200 Data-gathering channels—200 separate channels for each of six flatcars—transmit instrumentation readings through leads and mating boards to recorders. The mating boards located at each of the car positions provide power to operate the test specimens during the irradiation period.



A separate bank of recorders for each flatcar position records instrumentation readings—and punches them out on tape automatically. Data reduction center in Reactor Operations building processes tape. Closed circuit TV allows visual observation of reactor during the entire irradiation period.



Six separate and distinct systems or 5,700 cubic feet of volume with a frontal area of 400 square feet can be irradiated with the radiation effects reactor. Military vehicle and electo-hydraulic servomechanism for military applications are shown being irradiated on two of facility's six flatcars.

LOCKHEED NUCLEAR PRODUCTS

GEORGIA DIVISION: DAWSONVILLE, MARIETTA, ATLANTA

LOCKHEED

BEST WAY TO JUDGE A DICTATING MACHINE

LISTEN



HEAR THE NEW GELOSO

STENOTAPE DICTATING-TRANSCRIBING MACHINE

Only \$179⁹⁵
FED TAX INCLUDED
FULL YEAR GUARANTEE

Fidelity Makes The Difference

Yes, the best way is to listen...to the new Geloso StenOtape! From the first sound you hear conclusive proof of the difference fidelity makes. It's the most important feature in any dictating machine.

Fidelity clearly distinguishes the StenOtape. And its exclusive relaxed dictation system is a brand-new experience in dictating. There's no mike to hold—with both hands free you can walk while you talk, yet start, stop or quick-review at any time.

Your secretary relaxes, works faster with less effort. She hears every word as clearly as you spoke. Precision word counter enables her to judge letter lengths accurately, permits you to indicate "rush" portions exactly. Jamproof, trouble-free, StenOtape alone gives you a full year parts and labor guarantee.

Compact, 6½ lbs. light, always ready for dictating or transcribing, the same StenOtape does both—at one low price.

In the office, at home, on the road—for dictation, field reports, interviews, conferences, phone talks, even music—Geloso StenOtape records everything up to 2 hours on one reel of endlessly re-usable standard magnetic tape, up to 30 feet away. Always error-free; make a mistake—dictate over it. Geloso StenOtape with its built-in speaker, has more important features and low cost accessories that busy men demand and secretaries want than any other dictating machine. Nearly 500,000 in world-wide use by executives with things to say and no time to waste.

YOURS FREE! FACTS BOOK

For complete information about all dictating equipment, read "The Facts About Dictating Machines." This 16-page illustrated book—for the first time anywhere—tells all the important features you should look for. Makes public an independent survey among secretaries disclosing what they look for. Plus 50 new ways to save time and money in any business. Send for your free copy today. Without obligation, of course.

- American Geloso Electronics, Inc., Dept. 28
- 251 Park Avenue South, New York 10, N. Y. AL 4-2282
- Please RUSH, without obligation, new free 16-page illustrated book "The Facts About Dictating Machines"

Name
Company
Address
City Zone State



is negotiating with the U.A.R. to build a TV receiver assembly plant.

• **Famine in Revenue**—Advertising revenues are still skimpy. Some full-program sponsorship (as in the U.S.) and spot commercials (as in Britain), have won moderate success. Now TV stations are trying to sell time to big foreign companies operating in the area. Once they get some steady income, operators believe they will be able to develop better local talent and thus lure more viewers. The biggest need at the moment is an advertising technique suited to the area. Copying Western European and U.S. methods hasn't always worked because of cultural differences.

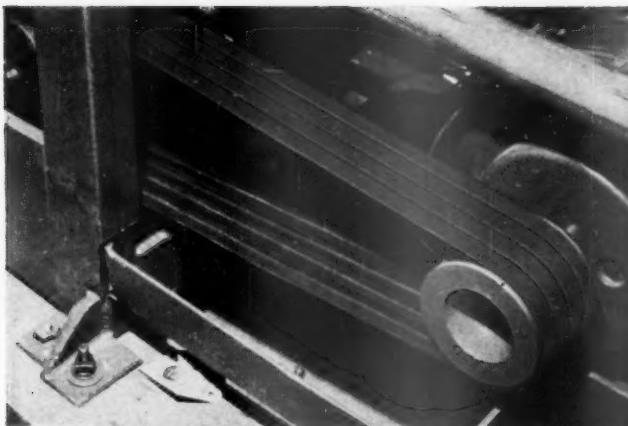
• **Program Features**—In quality, TV programs are not unlike those of the U.S. industry during its infant years. Movies and cabaret shows make up a good part of the fare. On Television-Iran, the feature attraction of the 4½ hours of daily broadcast is a children's hour—45 min. of live entertainment and 15 min. of cartoons.

Cosmopolitan Beirut has the problem of a multilingual audience. There, TV relies heavily on films from U.S., British, and French syndicates, which supply Alfred Hitchcock whodunits, Abbott and Costello slapstick comedies, and Dragnet cops-and-robbers shows. Some are dubbed in with Arabic, others with French, some dubbed with one language and subtitled with another.

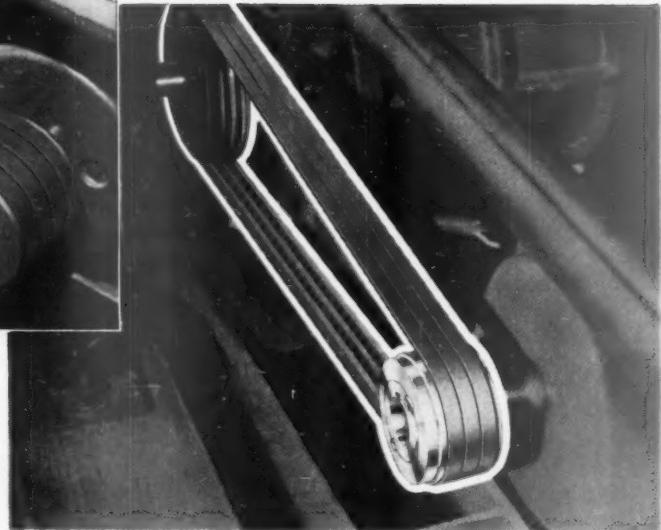
Local productions mostly are musical shows from local cabarets or the stations' studios. One producer reportedly is filming 26 episodes based on the Desi Arnaz-Lucille Ball "I Love Lucy" show, with two leading Arabian stars, Faten Hamama and Omar Sherif.

• **Station Censorship**—Moslem morality can also pose a problem. In Saudi Arabia, where movie houses and night clubs are banned as immoral, TV is highly suspect. When Aramco opened its station, it bent over backwards to conform with local custom. About 40% of the shows are educational—"English by TV," health advice, cooking lessons, and fire prevention tips. The station goes off the air during the Moslem prayer hours in midafternoon and at sunset. Scenes with liquor, gambling, dancing, and kissing are deleted. All programs are in Arabic, with dialogue and commentary dubbed in on all English language films—English-speaking viewers can tune in on radio for simultaneous English sound tracks.

Iraq is an exception to the entertainment theme in Middle East television. When the first station opened two years ago, it was intended as an entertainment and educational medium, with some time allotted for official ceremonies. But the Kassem regime, which came to power through a coup, turned TV into a propaganda weapon. END



Before: Four standard belts were required to drive the clothes pressing unit manufactured by a Utah company.



After: Three Gates Super HC V-Belts now handle the redesigned pressing unit drive — save more than 16 pounds in drive weight — 24% in drive cost.

Utah manufacturer cuts drive cost 24% with new high capacity V-Belt

Drive weight reduced 16 pounds per unit!

This manufacturer is just one of many who have already turned to Gates Super HC V-Belts to achieve far more compact, lighter weight, lower cost V-belt drives for all types of machines. With new Super HC

V-Belts, sheave dimensions can be reduced 30% to 50%, overall space up to 50%, and drive weight by 20% and more.

A product of Specialized Research in the world's largest V-belt laboratories at Gates, the Super HC V-Belt Drive is already standard equipment on production models in virtually every industry.

Engineering Service Nation-Wide

Whatever your plant's power transmission design problem, wherever you are, your nearby Gates Distributor or Field Representative is ready

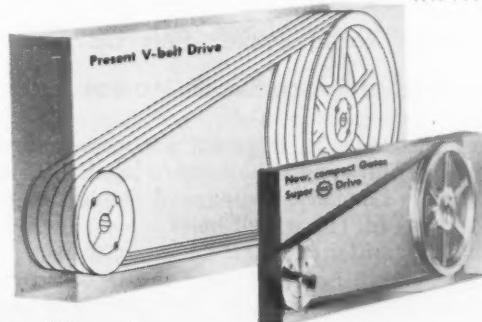
to assist you to cut space, weight, and costs with Super HC. Ask him for a copy of "The Modern Way to Design Multiple V-Belt Drives."

TPA 447

The Gates Rubber Company, Denver, Colorado
Gates Rubber of Canada Ltd., Brantford, Ontario



World's Largest Maker of V-Belts



Gates Super HC V-Belt Drives

same hp capacity
in smaller "package"

In Business Abroad

Chance Seen for More Trade With Poland As U.S. Delegation Reaches Warsaw

The U.S. is looking for more trade with Poland. Visiting Warsaw this week is a delegation from Washington headed by Commerce Secy. Mueller and including New York banker Gabriel Hauge, who was formerly a White House economic adviser.

Officially, the group is returning a similar visit of Polish leaders last fall. No diplomatic negotiations are scheduled. But informally, increased trade and economic assistance will undoubtedly come up in discussions.

Because its agriculture is suffering, Poland would like some of the U.S. food surplus. Washington would like to promote sales of farm and industrial machinery in Poland. The possibilities for such trade are probably better than with most Communist countries—Washington is less restrictive on trade controls with Poland than with any other Communist satellite.

An agreement on settlement of Polish lend-lease debts to the U.S.—now in the official negotiating stage—could clear the way for private commercial credits to Poland.

French Chemical Giants Set Up Joint Subsidiary for Marketing

France's two biggest chemical companies, Pechiney and Saint Gobain, have joined hands to meet oncoming Common Market competition, especially from West Germany.

The two are setting up a jointly owned subsidiary to market chemical products. This subsidiary will also coordinate research and production programs, establish new plants, and progressively take over all chemical interests of the two parent companies in France. Saint Gobain's glass manufacturing and Pechiney's aluminum production are not affected by the agreement.

Japanese Radio Maker Sets Up Shop In Ireland to Reach British Market

Ireland's campaign to attract foreign investment has reached halfway around the world to Japan. The Japanese Embassy in London has confirmed Dublin reports that Sony Corp., of Tokyo, will build a plant in Ireland to assemble transistor radios for the export market.

The Japanese firm will move into a new factory at Shannon Airport next January. Sets assembled there will have about 50% of cost added in Ireland to enable them to qualify as Irish manufacturers and thus enjoy tariff preference in British and Commonwealth markets.

This will also give the Japanese company access to

markets without the quota restrictions that are applied to some Japanese products. British electronics manufacturers, fearing price undercutting, have vigorously protested the move. Japanese competition could also hurt U.S. electronic exports.

Initially, the plant will make portable transistor sets. As local skills grow, pocket radios may be added later. When in full operation, the plant will have an annual capacity of 250,000 sets.

Italian, Two West German Companies To Build Big Chemical Plant in India

The Italian chemical company Montecatini and the West German firms of Pintsch-Bamag and Linde have agreed to build the world's largest urea plant in India for the Neyveli Lignite Corp., Ltd.

Costing \$52-million, the plant is scheduled to go on stream in 1963 with an annual capacity of 152,000 tons. Montecatini will coordinate construction and train Indians to operate the plant. Another Italian company, Ansaldo, will design and fabricate the equipment for Montecatini. Pintsch-Bamag will put up a synthetic gas unit, and Linde an air and gas fractional distillation unit.

Dutch Businessmen Not So Sure

U.S. Companies Should Be Encouraged

Although Dutch officials continue to encourage U.S. investments in the Netherlands, leading Dutch industrialists are becoming uneasy.

Some complain about minor irritations. The Dutchers say U.S. companies increase tension in the labor market and reduce the already scarce number of good industrial sites.

Other objections are more serious. Because U.S. subsidiaries can transfer considerable amounts to parent companies in payment for technical assistance, services, and royalties, they reduce their profits taxable in the Netherlands. Moreover, say Dutch businessmen, U.S. enterprises are ducking local taxes by establishing sales subsidiaries in Switzerland, where company taxes are much lower.

Red Chinese Claim Year-to-Year Gains

In Civil Aviation Routes and Traffic

A small measure of Communist China's "Great Leap Forward" appeared this week with a claim that Red China's civil air fleet, using Russian aircraft primarily, now has 36,000 kilometers (about 22,300 mi.) of routes connecting 72 cities inside and outside the country.

Kuan Jen-nun, Communist Chinese chief of civil aviation, also says that passenger traffic for the first six months of 1959 was more than twice that of the same period last year. Air freight is up approximately 65%, he says.

See why
Pittsburgh Corning Products
make the things you build
cost less, last longer, look better

example:



PC Glass Block Panels at Electric Boat . . . for even density lighting, good atmospheric control, attractive appearance and minimum maintenance.

These benefits have proved the soundness of the decision by Electric Boat Company, Division of General Dynamics, to use PC Glass Blocks for new panels and sash replacement at their Groton, Conn., plant. Attractive on the outside, the Glass Block panels have virtually eliminated morning glare and afternoon shadow in laboratories and working areas.

The excellent insulating value of the blocks makes it far easier to insure accurate, pressurized atmospheric control within the building. Maintenance has been negligible . . . with nothing to rust, rot or need painting . . . and not a single instance of breakage or structural failure in the glass block panels.

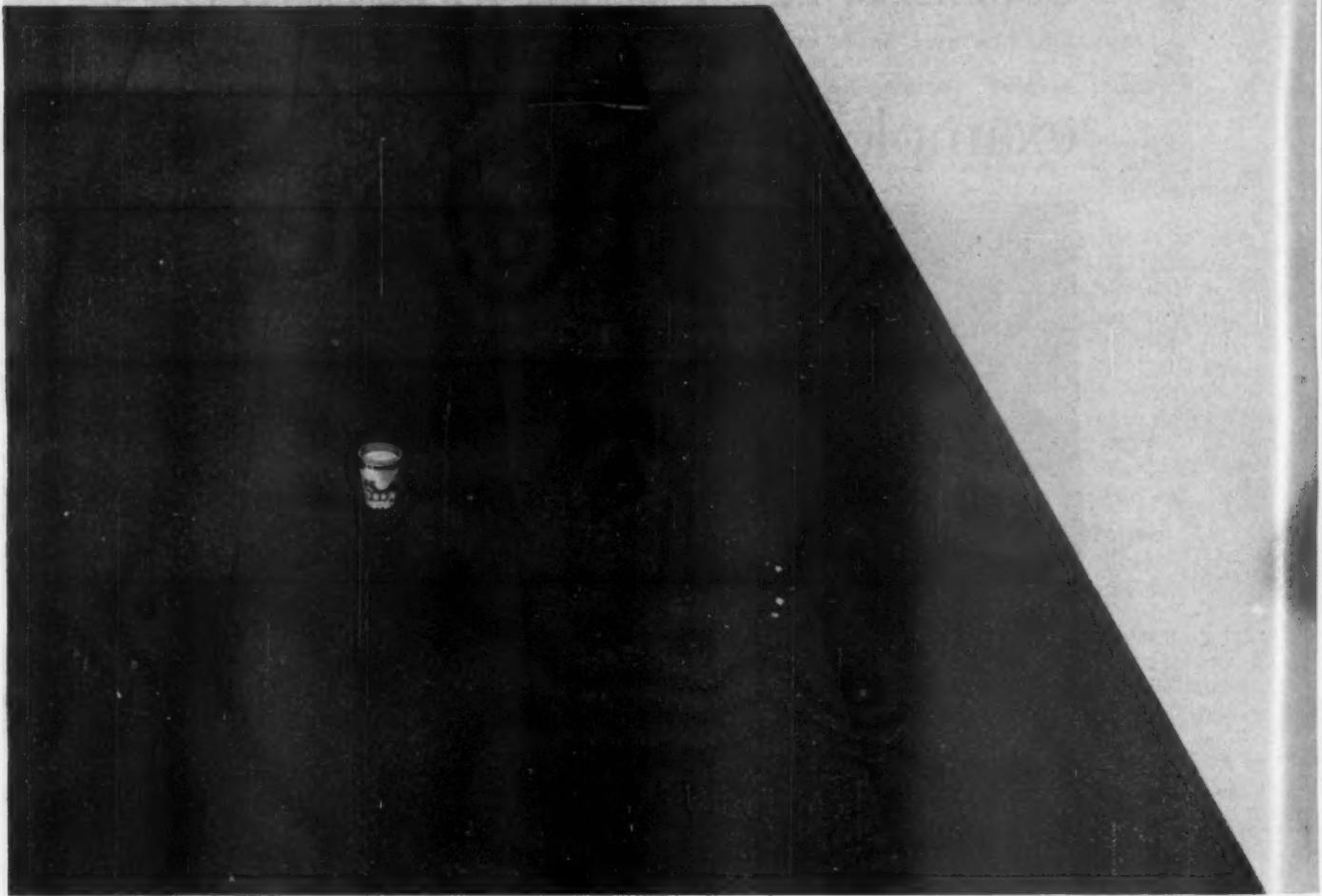
This kind of experience makes PC Glass Block panels the odds-on favorite to eliminate window problems in virtually any type of industrial plant or commercial building.

(Continued)

P I T T S B U R G H P C C O R N I N G

example:

An ounce of water



Most thermal insulations absorb literally gallons of water in a surprisingly short time. FOAMGLAS insulation doesn't. What's that do to insulating value? Think back to a time when you were caught on a bitter cold day with your feet freezing in wet socks. Your socks should have served as insulators. But they were wet and couldn't insulate. An absorbent insulation soon reaches the point where it's no more effective than your wet socks.

And remember: most materials claiming to be waterproof do absorb airborne water vapor. When that vapor condenses inside the material, insulating value goes out the window.

P I T T S B U R G H

**or 100 gallons . . . the difference shows why
FOAMGLAS® insulation guarantees constant k-factor and nothing else can**



FOAMGLAS, on the other hand, is 20,000 times less permeable than the next most effective insulation. Thus, in the time it would take a given amount of FOAMGLAS to pick up an ounce of condensed water vapor, an identical quantity of any other insulation would pick up over 100 gallons. This contrast demonstrates why FOAMGLAS maintains its original effectiveness long after other materials have become too wet to insulate.

This illustrates why it is so important for you to compare all insulating materials. High Voltage Engineering did and selected FOAMGLAS. See why on the next page.

(Continued)

pc CORNING

example:

FOAMGLAS Roof Insulation . . . comparison tested to prove its superiority for this High Voltage Engineering Corp. roof.

Time and again, when insulations are carefully compared, FOAMGLAS gets the nod. High Voltage Engineering Corp. made a point by point comparison of roof insulations . . . and they picked FOAMGLAS for the roof of their new \$1½-million plant at Burlington, Mass.

They found no other roof insulation could deliver as valuable a combination of benefits as FOAMGLAS. The combination? First, moisture resistance. As pointed out on the preceding page, FOAMGLAS stays dry, thus insuring constant insulating efficiency. And strength. The average ultimate compressive strength of FOAMGLAS is over 7 tons per sq. ft., so it forms a remarkably solid base for built up roofing. Easy to cut and fit, it slashes roof installation time and money. It's light in weight and it can't burn.

And High Voltage Engineering found that the dependability of FOAMGLAS promised to cut their heating costs by some \$8,500 a year *every year*. Why not make your own comparisons?

(*To be continued*)



YOU CAN LEARN MORE

PITTSBURGH CORNING CORPORATION
Dept. F-119, One Gateway Center, Pittsburgh 22, Pa.

Please send me descriptive literature on the building products checked below.

- | | |
|---|---|
| <input type="checkbox"/> FOAMGLAS Roof Insulation | <input type="checkbox"/> PC GLASS BLOCKS |
| <input type="checkbox"/> FOAMGLAS Low Temperature Insulation | <input type="checkbox"/> The PC 4 x 12 Block |
| <input type="checkbox"/> FOAMGLAS Insulation for Piping and Equipment | <input type="checkbox"/> PC Color Glass Blocks |
| <input type="checkbox"/> FOAMGLAS STAY-DRY Pipe Insulation | <input type="checkbox"/> FOAMSIL®, the Acid-Proof Insulating Refractory |

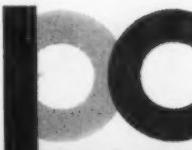
Name _____

Company _____ Title _____

Address _____

City _____ Zone _____ State _____

P I T T S B U R G H



C O R N I N G

FINANCE

Radio Network Pulls Out of Jam

Mutual Broadcasting System, "the fourth network," comes out of reorganization next week.

Unless there's a last-minute hitch, trouble-ridden Mutual Broadcasting System—largest radio network in terms of stations (454) but a poor fourth in terms of advertising dollars (\$5-million)—will come out of a four-month financial reorganization next week.

On July 1, when the network filed a voluntary petition for bankruptcy, it was \$3-million in the hole. When it comes out with the court's imprimatur, it will have wiped the slate clean with its creditors, gained new advertisers, and earned the dubious distinction of being the first company put in troubled waters by Alexander L. Guterman to emerge from the reorganization mill.

• **Claim Thrown Out**—The last road-block was cleared last week when U.S. Referee Asa Herzog threw out a \$750,000 claim against MBS by the Dominican Republic.

The Trujillo government had claimed the money was due it for "undelivered services." It had signed a contract with Guterman's Radio News Service Corp.—supposedly a Mutual subsidiary—with the understanding that Mutual would broadcast favorable news to the Trujillo regime. Now it was claiming that Mutual hadn't delivered. (In September, Guterman was indicted on three counts for this contract, principally for violation of the Foreign Agents Registration Act.)

Herzog ruled that Mutual wasn't involved in any way, that Guterman had set up a dummy corporation to pull off his deal.

• **Hard Going**—In his brief stay at Mutual's helm from September, 1958, to February, 1959, Guterman saddled the network with almost insurmountable debts, embarrassment, and the ignominy of being a pawn in an international intrigue. Still, all this merely accelerated a 5-year slide in the network's earnings. When it comes out of reorganization, Mutual still will face hard going.

Mutual is not very big pumpkins in the radio world, by the measure of advertising dollars. Advertisers spent \$616-million on radio last year; the networks got only \$61-million of that, and Mutual could garner only less than \$5-million. This year, too, it's running behind CBS, NBC, and ABC.

Among all the nets, moreover, Mutual is unique. It has no TV operations at all, doesn't own or operate any radio stations. It consists solely of a relatively

small staff and some office and studio equipment.

• **One Basket**—In some respects, this has advantages. Mutual's simple structure means it can operate at less expense than the other nets. And it can make any moves it wants without worrying about side effects on other parts of its operations.

In its singleness, there are also disadvantages. CBS, NBC, and ABC have operated substantially in the red in recent years on radio, but these losses have been offset by profits from TV and from owned and operated stations. Mutual has had no TV income to fall back on in its lean years. And now it must survive solely on its ability to sell radio network advertising—something that has proved harder and harder to do since TV appeared on the scene, although national spot and local station advertising have been picking up.

It finally has the management and capital to give it a fighting chance.

• **Management**—Its new president is veteran newspaper man and newscaster Robert F. Hurleigh, who has been with Mutual since 1944. More than any other person, Hurleigh has kept Mutual afloat in the past year—building up loyalties among the staff and clients, finding new money, keeping creditors away from the door. The industry regards him as an intense, dedicated man who knows all the ins and outs.

It was at his urging that Albert G. McCarthy, Jr., Tampa real estate man and industrialist, and Chester Ferguson, a partner in the Tampa law firm of MacFarlane, Ferguson, Allison & Kelly, agreed to angel Mutual and put up the cash to pay off creditors. McCarthy says Hurleigh talked him into Mutual. "He convinced me this group of independent stations was contributing to an important need," says McCarthy.

"We're here to stay," Hurleigh insists. At the year's outset, MBS was losing about \$110,000 a month. This has now been trimmed to \$55,000 a month—but MBS still has an operating deficit of about \$2-million.

But Hurleigh claims the network will be in the black next January. The network has signed \$1.3-million in new business—Plymouth, Mercury, American Machine & Foundry, among others—and renewals—including R. J. Reynolds and Sterling Drug. Hurleigh feels the network will gross \$6-million in billings next year, compared with \$5-million this year—it's current potential, he says, is \$8-million.

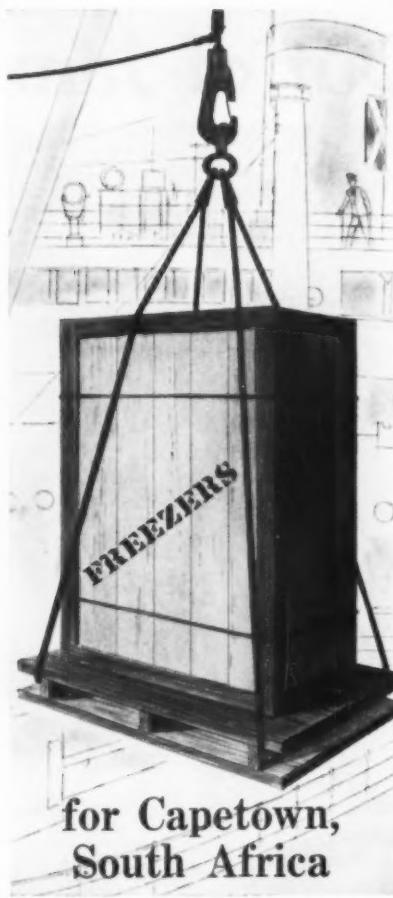
It will take more than one good year, though, to put Mutual on the road to



ROBERT F. HURLEIGH is new president of Mutual Broadcasting, after several life-saving acts for it in recent months.



ALBERT G. McCARTHY, Jr., Tampa businessman, has put new money into Mutual, along with Chester Ferguson, attorney.



for Capetown, South Africa

A Zulu in full tribal dress dips his hand into the frozen food cabinet of a South African supermarket . . . and completes the link of old and new that involves two continents.

The freezer cabinet came from the U. S.—shipped via Farrell Lines by the Kelvinator Division of American Motors Corporation. It is representative of the phenomenal progress and development of this "Continent of Contrast" . . . and of the expanding African market for U. S. goods.

Farrell Lines is expert in this market, with years of invaluable experience gained through carrying a countless variety of products to Africa and back. For answers to your questions about African trade, write or call: Farrell Lines, 26 Beaver St., N.Y. WH 4-7460.



prosperity, after so many years of struggle and at a time when radio has such competition from TV.

I. The Downward Way

Until TV invaded radio's traditional markets, MBS was up there with the other networks—with even more stations, but smaller, lower-powered ones. The crisis began during Mutual's years under Thomas F. O'Neil, of the General Tire & Rubber O'Neils. Along about then, the corporate name was changed to General Teleradio, and later to RKO Teleradio when the company bought RKO Radio Pictures.

The challenge of TV, after 1950, upset O'Neil's big plans for Mutual. Radio network advertising went into a decline; stations dropped their network affiliations to go it alone with local advertising. In 1953, Mutual had 563 affiliates; now it's down to 454.

- **On the Chin**—Since Mutual had no TV at all to balance its radio losses, it suffered more than the other networks. In 1957, O'Neil got out. RKO Radio Pictures retained its TV-radio stations but sold the network to a group headed by Dr. Armand Hammer, head of Occidental Petroleum Corp. At the time, the purchase price was reported in excess of \$1.5-million, but sources close to the company now say it was closer to \$500,000.

If Hammer hoped to rejuvenate MBS, he was rudely awakened. The network continued to lose money. However, Hammer was able to interest Guterma and Hal Roach, Jr., in buying it. Roach, who owned some profitable TV film properties, talked of using Mutual as the nucleus of a radio-TV combination for medium-sized advertisers.

- **Ownership Mesh**—In September, 1958, Hammer sold MBS to Hal Roach Studios for between \$500,000 and \$900,000, according to people close to the deal. Guterma became president, although his connection was indirect—Hal Roach Studios was a wholly owned subsidiary of Scranton Corp., which was a partly owned subsidiary of F. L. Jacobs Co., Detroit auto parts maker and Guterma's main base.

In less than six months, Guterma was out. SEC suspended trading in Jacobs stock, charged that Guterma was liquidating his position fraudulently by hocking all his stock with money lenders, to be sold by them if he didn't pay up. It was, said SEC, a classic case of "bailout."

When Guterma resigned, Roach took over as president. The network was running deeper and deeper into the red. Stations and talent hadn't been paid; advertisers were getting leery. Roach tried to sell the network to Max Factor & Co., but the deal fell through.

Then came what looked like the final

blow: American Telephone & Telegraph threatened to unplug its lines to MBS stations unless an overdue bill of around \$300,000 was paid. Roach couldn't raise any such sum, and Mutual teetered on the edge.

II. Saving the Day

But Hurleigh thought he could get the company back on its feet. He had joined Mutual in 1944 as the network's Midwest bureau chief, and had been elected an MBS vice-president in Oct., 1957. He had tremendous loyalty to the network, and he felt his fellow newscasters—Fulton Lewis, Jr., Gabriel Heatter, Cedric Foster, among others, would stick, too.

In early March, he pressed Roach for an option to purchase the network. Roach had to agree, or fold up. He gave Hurleigh a one-day option written out on yellow foolscap—at no cost.

Hurleigh quickly called on long-time political contacts in Washington to intercede for him at AT&T—to attest to his personal integrity and capabilities. The calls paid off. AT&T agreed to a week's grace. Hurleigh then hammered out a 30-day option with Roach, and used the weekend to make frantic—but futile—calls to anyone who might be interested in purchasing the Mutual organization.

- **New Crisis**—AT&T then issued a notice to its field directors that Mutual's lines would be pulled that Sunday night. The end seemed at hand. However, in midweek, Hurleigh had been introduced to Malcolm Smith, head of Harrison Home Products Co., who had been successful in mail-order selling of phonograph records. Smith said he was interested in Mutual.

That Friday, Hurleigh, MBS attorneys, Smith, and AT&T officials met in New York's Manhattan Hotel. All day they pounded at each other, trying to work out an agreement. At 9 p.m., Smith received a week's option to buy MBS, and wrote two checks—each for \$25,000. One went to AT&T for another week's payment for use of its lines; the other went into Mutual's coffers, to keep the organization running for a week.

A few days later, the option was extended for another week to give Smith time to discuss the deal with his close associate, Richard H. Davimos. In the week of Mar. 16, Smith and Davimos agreed to take over Mutual, and hopes soared that the new team might be able to pull Mutual through.

III. International Complications

Shortly, however, MBS got another rude jolt. In February, Mutual newscasters had noticed a flood of news releases, all neatly red-penciled to accent



These good-looking shipping containers are made from Sunkraft linerboard—one of 24 special linerboards made by International Paper.

Amazing new Hydro-Chem by International Paper withstands rain, cold storage, manhandling

HERE, at last, is a corrugating medium that weathers grueling shipping problems that could make a soggy mess out of any ordinary container. And for surprisingly low cost!

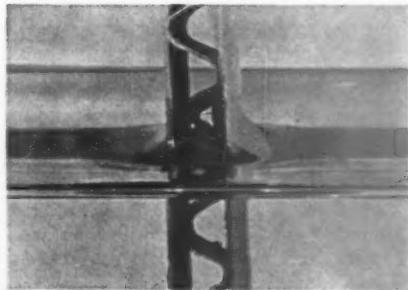
It's International Paper's amazing new Hydro-Chem. Boxmakers now hail it as perhaps the greatest advance in corrugating materials in over a decade. Here's why:

Hydro-Chem's remarkable *wet strength* can withstand prolonged periods of high

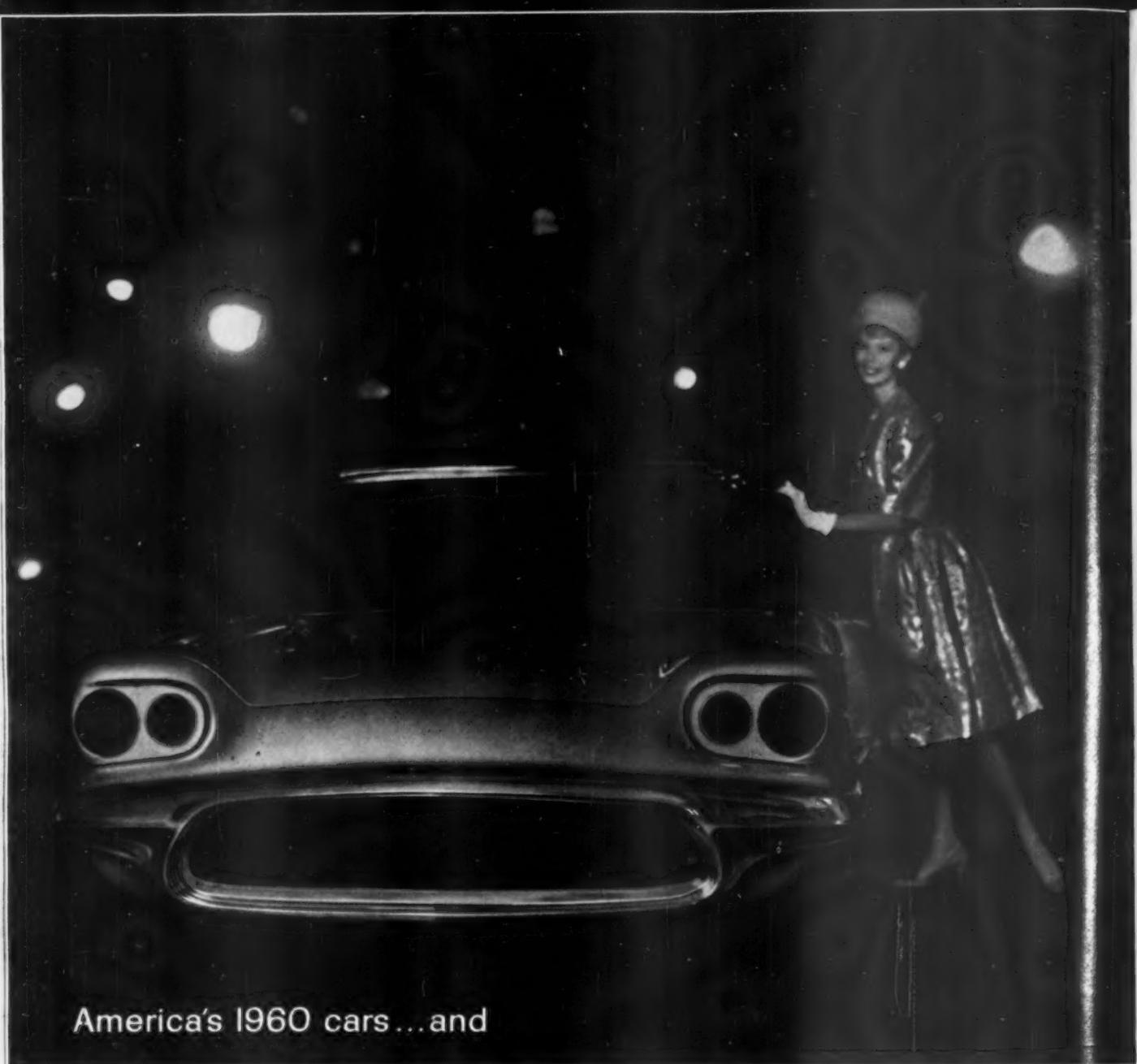
humidity, cold storage, severe weather—even total submersion! Hydro-Chem is ideal for shipping meat, fruit, vegetables, flowers—and for freezer storage.

New Hydro-Chem gives "long haul" performance—and, unlike coated, sized or impregnated corrugated media, has superior bonding and runability qualities.

If your shipping containers need built-in *wet strength*, it will pay you to see your boxmaker about new Hydro-Chem today.



New Hydro-Chem retains full strength even when dunked repeatedly in water.



America's 1960 cars...and

NATIONAL STEEL

From coast to coast, it's 1960—American Auto Time. Time for America to get an eyeful of what's new; to choose from more makes, more models; to drive an even better car—culmination of the auto industry's continuing effort to improve upon improvements in styling, safety, comfort and dependability.

Contributing to this annual advancement of the American automobile is National Steel, biggest U.S. producer of cold-rolled sheet steel and a major supplier to the automobile industry.

Among the many steels that National Steel provides: Smoother, more ductile carbon steels with a no-holds-barred potential for imaginative body styling. Rugged zinc-coated steels for tough,

corrosion-resistant parts. Extra-high-strength steels that offer extra protection without extra weight in parts subjected to stress.

And the work goes on—at our Great Lakes Steel Division in Detroit and at our Weirton Steel Division in Weirton, West Virginia—as National Steel, via accelerated research, continues its development of the steels that help shape automotive progress.

The improved steels of National Steel's major divisions serve many other American industries, too. Keeping pace with their need, National Steel has launched a \$300-million-expansion program—a program whose ramifications will extend throughout industry as National Steel grows to help industry grow.



NATIONAL STEEL CORPORATION, GRANT BUILDING, PITTSBURGH, PA. Major divisions: Great Lakes Steel Corporation • Weirton Steel Company
Midwest Steel Corporation • Stran-Steel Corporation • Enamelstrip Corporation • The Hanna Furnace Corporation • National Steel Products Company

the key phrases, plugging the Dominican Republic. Many were tossed in the wastebasket, but others were aired nationwide.

Now, in March, Hurleigh heard rumbles that Guterma had made a secret deal with the Trujillo government. So when he received an invitation to celebrate the 29th anniversary of the Era of Trujillo, he accepted promptly. It was at a palace reception that Hurleigh first heard from a Trujillo aide, Otto Vega, that Guterma had signed a contract with the Trujillo government to propagandize it on MBS. Vega told Hurleigh that Guterma had even passed MBS stock as collateral for the deal—although Hurleigh told Vega that MBS' stock was locked in a New York vault.

- **Airing the Story**—Hurleigh raced back to New York with Vega's story. He got in touch with Smith, later with SEC and the Justice Dept. Justice then came through with its indictment against Guterma, Roach, and Garland Culpepper, Jr., a Guterma associate, for failing to register as agents of a foreign government.

As Justice pieced the story together, Guterma and Roach were busy filming pictures in Cuba at the beginning of the year when Batista's government crumbled. The two looked for a more favorable filming site, and fortune blessed them in the person of Porfirio Rubirosa, then Dominican Republic ambassador to Cuba.

Rubirosa suggested that Trujillo would welcome their presence. The two men went to the island, and wound up with an even bigger deal. According to Justice, they agreed to use Mutual as a Dominican propaganda vehicle for \$750,000. The money, Justice says, passed hands about Feb. 6; the flood of news releases and several telephone calls from Guterma with "must" news on the Trujillo regime followed.

IV. New Transfusion

Meanwhile, Smith was running out of gas, and the new scandal didn't help his peace of mind, either. His group had invested some \$250,000 in MBS. Still the business slide continued, and Smith didn't have the resources to keep funds flowing into MBS. A new transfusion was badly needed. Toward the end of June a group headed by Sen. Homer Capehart and news commentator Theodore Granik was given a 10-day purchase option. But the deadline ran out without any action.

- **Another Rescue**—Hurleigh swung into action again. He called McCarthy, who had expressed interest at the time Smith had his option to buy. McCarthy said he would take over MBS, but he set certain conditions. He insisted that the company go through reorganization, clear up its debts. He also insisted that

Hurleigh assume the presidency and see MBS through the reorganization.

- **Bankruptcy**—On July 1, Hurleigh bought the company for \$1 from Smith and MBS voluntarily petitioned for bankruptcy. Its liabilities were \$3,195,-607; its assets, \$579,607.

Hurleigh explains that, by the voluntary petition, MBS managed to keep control of its own company—instead of coming under court-appointed trustees.

It was a good public relations move, anyway, since forced bankruptcy would probably have caused advertisers and stations to sever their relations.

Since then, McCarthy and Ferguson have poured about \$600,000 into the network. When MBS comes out of reorganization, McCarthy and Ferguson will get Hurleigh's stock. The two men figure they will have to sink about \$1.25-million into Mutual to right it.

V. The Future

When it emerges from the court, Mutual will bear many scars. But it could have been worse than it is.

A creditors' formula has been worked out in which suppliers will accept a 10¢-on-the-dollar settlement for the \$2.3-million owed them. Talent will receive 50¢-on-the-dollar up to \$600, and 10¢ for all amounts over that figure. Holders of a \$1.3-million note agreed to accept a 10-year extension. This will go a long way toward helping Mutual's cash position.

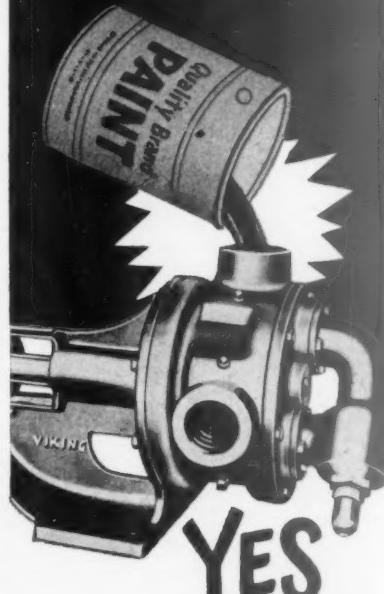
Moreover, only one advertiser dropped off MBS's list when it went into the courts—and he only for one month. Since then, in a move that surprised the industry, MBS has also been able to re-sign New York's WOR to an affiliate contract. It had been feared that if WOR went elsewhere, Mutual would lose its flagship station and possibly all chances to get back on its feet. But the network sweetened its deal with WOR, and the station stuck. MBS did lose four other stations—all from the RKO Teleradio chain—but it has filled all these markets.

- **Room for a Fourth?**—There's still a very real question of whether Mutual can regain prosperity. There are those in the industry who feel there's not enough room for a fourth network, that the advertising dollars can only support three nets. Hurleigh himself admits to some doubts on this point (he even talks about a possible merger) but he feels Mutual is strong enough now to show at least some profits.

On another important question, Hurleigh feels Mutual can do without a TV setup. Mutual acknowledges that its lack of TV outlets puts it a strike behind, but it maintains that its programming of news, sports, and special events ("better than anyone else's") keeps it squarely in business. END

WHAT!

PUMP *ABRASIVE LIQUIDS?



YES

it's practical with
the new

VIKING

Yes, you can pump paints, inks and other *abrasive liquids with double to triple pump life assured, when you install a new Viking 64124 pump. They're field-tested and proved! They're especially constructed, including ceramic bearings and mechanical seals, and suitable for *abrasive liquids from a minimum viscosity of 100 S. S. U. to the heaviest viscous types.

G.P.M. sizes 3-6-12-16-25-40
Write today, giving this information:

- Liquid pumped
- Viscosity of liquid (S.S.U.)
- Percentage and type of solids present in liquid
- Temperature of liquid
- Specific gravity
- Capacity of pump
- Suction lift or head
- Discharge pressure

Ask for bulletin, series SP-507

*Consult factory for recommendations for pumping abrasive liquids other than paints and inks.

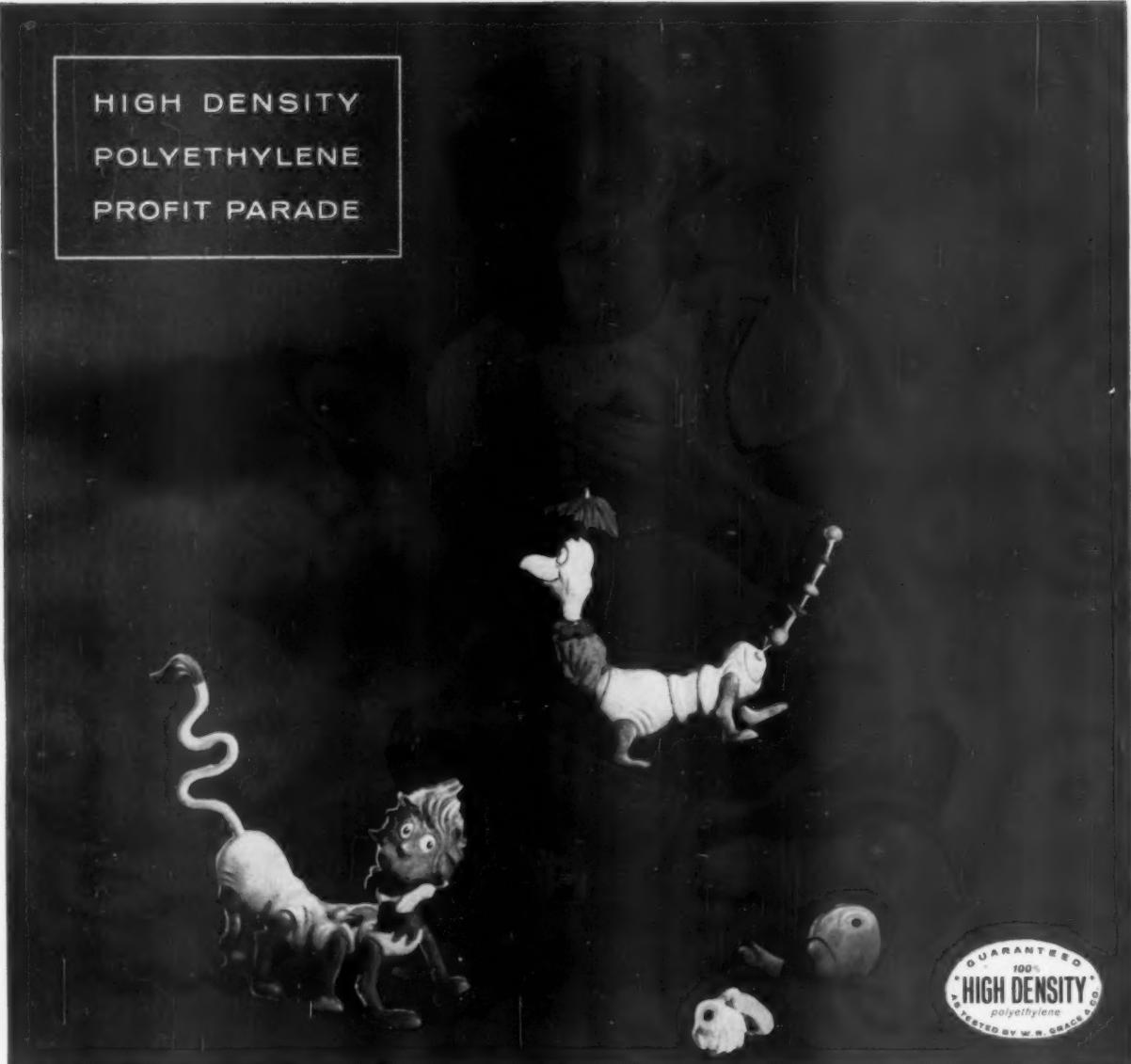


VIKING PUMP CO.

Cedar Falls, Iowa, U.S.A.

In Canada, it's "ROTO-KING" Pumps
Offices and Distributors in Principal Cities
See your Classified Telephone Directory

HIGH DENSITY
POLYETHYLENE
PROFIT PARADE



©1959 Dr. Seuss



Play-proof Properties Spark New Product Idea

Developing a new product? Grex high density polyethylene could stir up as much excitement for you as it's doing for Revell, Inc. Their new product combines the toughness of Grex with the appeal of fantastic animal characters that roam the pages of Dr. Seuss' juvenile books. Sold in kits of interchangeable parts, Dr. Seuss Zoo inhabitants snap together and pull apart in millions of ways—are colorful and strong enough to take the roughest treatment without breaking, chipping or cracking.

There is virtually no limit to profitable new product ap-

plications with this versatile Grace plastic. Here are just a few of its advantages: It can be fabricated at low cost and molded in any color. It is a hard, stiff, rugged thermoplastic that takes boiling or freezing without losing its shape or strength.

Find out more about high density polyethylene for the new product you have in mind by calling in the experts. Grace has the production facilities, technical service and experience to help put your product in the Grex profit parade. We're easy to do business with.

Grex is the trademark for W. R. Grace & Co.'s Polyolefins.

W.R. GRACE & CO.
POLYMER CHEMICALS DIVISION



CLIFTON, NEW JERSEY

W.R. Grace & Co.

serves the nation's
leading industries
through its chemical group.



The products of our chemical divisions are enormously diverse, ranging from rare earths to plastic packaging . . . from shoe materials to sulfuric acid.

Each product owes its merits to research, conducted both by the operating divisions themselves and by our \$5 million Washington Research Center, which alone employs over 250 scientists and technicians.

The Grace Chemical Group knows its business . . . thoroughly. We'd welcome the opportunity to serve you.

THE GRACE CHEMICAL GROUP

Polymer Chemicals Division

Cryovac Division

Davison Chemical Division

Dewey and Almy Chemical Division

Dewey and Almy Overseas Division

Grace Chemical Division

Hatco Chemical Division

Research Division

W.R. GRACE & CO.
7 Hanover Square, New York 5, N.Y.



PRINCIPAL PRODUCTS: SYNTHETIC CATALYSTS
AMMONIA • UREA • HIGH DENSITY POLYETHYLENE
SPECIAL SYNTHETIC RUBBERS AND RESINS • SILICA
GEL AND OTHER DESICCANTS • SULFURIC ACID
CONTAINER SEALING COMPOUNDS • PLASTIC FILMS
AND BAGS FOR PACKAGING • BATTERY SEPARATORS
FERTILIZERS • NUCLEAR REACTOR MATERIALS
ULTRA HIGH-PURITY SILICON • ESTERS AS PLASTI-
CIZERS AND FOR JET LUBRICANTS • AND OTHER IN-
DUSTRIAL CHEMICALS AND CHEMICAL SPECIALTIES

Worrisome Windfall for Steel

Inventory depletion during strike means—by reverse twist of LIFO accounting—bookkeeping profits and a painful income tax bite for some companies, notably warehousemen.

As steelworkers slowly streamed back to the mills this week, most steel companies began adding up the tremendous losses imposed by the longest strike in history. At a significant number of plants across the country, however, the worry wasn't losses but profits—"windfall" bookkeeping profits that for some companies may mean painful increases in corporate income taxes.

These outfits have been caught in the backfire of a special mechanism for figuring up inventory costs on tax returns. It's known to accountants as LIFO, or last in, first out. Ironically, it's designed to slice the corporate tax bill in a time of rising prices.

• **Biggest Bite**—Most of the big steel companies—16 out of the top 20—as well as 40% of all steel warehousemen, use LIFO accounting in figuring their taxes. (The others use alternate methods of accounting for inventories, including FIFO, first in, first out. One warehouseman explains his firm is opposed to LIFO "because of the very situation which confronts LIFO users now.") But the tax squeeze from paper LIFO profits won't affect them all equally. It will put the biggest bite on warehousemen that kept going during the strike—and as a result, the American Steel Warehouse Assn. may ask Congress for a special tax exemption on these paper profits.

Charles L. Hardy, president of Joseph T. Ryerson & Son, Inc., warehousing subsidiary for Inland Steel, says that he expects his company to have a "substantial" tax increase due to paper profits arising from LIFO inventory accounting. A. M. Castle & Co., one of the largest independent steel warehousemen, notes that it has saved \$1-million to \$1.5-million in taxes since it went on LIFO in 1956. "But this year," says Vice-Pres. R. J. Heggie, "we may lose about \$500,000 in extra taxes on paper LIFO profits."

Companies such as Ryerson and Castle have been caught because they have had to strip their shelves bare in order to satisfy customer demands during the strike. And they probably won't be able to rebuild their stocks by the time they close their books for tax purposes.

• **Figures and Facts**—In order to understand how this works, you have to take a look at how inventory costs are figured under the LIFO system, and how this affects net income, and hence taxes.

With LIFO, a company assumes that the items it purchases for inventory are used in just the reverse order that they are received—in other words, that the last items in are literally the first items out. A good analogy would be a pile of coal: As new coal is purchased, it is dumped on top of the pile, then scooped from the top of the pile to put into the furnace.

LIFO inventory accounting, however, isn't necessarily based on literal fact. All a company has to do is notify the Internal Revenue Service that it is adopting LIFO; from then on it can apply the method to all inventories, whether or not they are in fact run on a last in, first out basis. But there's one catch: Once a company decides to use LIFO, it may be stuck with it. IRS won't normally allow a company to abandon the LIFO method once it has been adopted—although there have been instances to the contrary.

• **Tax Angle**—Companies adopt this method of accounting because—in a time of rising prices—LIFO matches up current selling prices with current inventory costs, and, in the process, provides a good method of reducing taxable net income. Here's what happens:

In figuring net income for taxes, one of the biggest deductions from gross revenue is always the cost of inventory used in making whatever finished products the company sells, or, in the case of a warehouseman, the cost of the products that are resold. To determine the value of inventory used, an accountant normally takes the inventory at the beginning of the tax year, adds inventory bought during the year, then subtracts what's left at yearend.

If prices are rising, it's clear that the goods purchased most recently are the most expensive. Thus, with LIFO, which assumes that these expensive purchases are the ones that are used, what's left over at yearend is going to be valued on the basis of earlier, lower prices.

The tax saving stems from the fact that the lower the value of the closing inventory, the higher must be the cost of inventory sold. If a company can increase the bookkeeping cost of the inventory sold by using LIFO on its tax return, then its taxable net income is going to be proportionately lower.

• **Substantial**—The longer a company uses LIFO, the greater the disparity becomes between current costs and prices that appear on its books. Some steel

no tax

on export profits for industries LOCATED IN IRELAND

Ireland today, moving forward with great industrial strides, offers incentives especially ideal for industries wishing to locate close to prime European markets. Substantial free grants are given for factories, machinery, and training of labor of which there is a plentiful supply; full transfer in dollars of profits and capital is guaranteed; transport and power facilities are excellent.

During the past two years, more than 60 industries from overseas have located in Ireland... and for sound business reasons! Ireland has an economy based on private enterprise. Irish products enjoy preferential treatment in most Sterling area countries. And export profits are 100% exempt from taxes for 10 years (increased to 25 years for manufacturing located at Shannon Airport).



Comprehensive brochure on request. Write or call:
Cyril Count McCormack, U.S. Director

IRISH INDUSTRIAL DEVELOPMENT AUTHORITY

405 Lexington Avenue, New York 17, N.Y. • Telephone: OXFORD 7-0848

. . . steel warehousers are forced to dip into the LIFO reserve they've been building up on balance sheets . . .

(STORY on page 65)

warehousers, for example, carry parts of their inventories at pre-World War II prices of about \$80 a ton. It would cost almost twice that to replace them.

LIFO's impact on net income can be very substantial. When Westinghouse Electric Corp., for example, went on LIFO in 1956 its pretax net income was sliced by about \$25-million, for a tax saving of about \$12-million. This cuts income available for shareholders, of course, but companies figure the tax saving makes it worth while.

- **Going Into Reverse**—To make the tax saving, you must have inventory left over at the yearend. The system, in fact, is based on the assumption that a company carries over from year to year a certain base stock. But when—as in the case of this year's steel strike—a strike lasts much longer than anyone expects and eats up inventories, there's a booming effect.

Steel warehousers, with nothing left on their shelves, are forced to dip into the LIFO reserve they've been building up for years on their balance sheets. This means deducting from gross revenue inventory costs based on purchases 10 or 15 years ago. In some cases this will result in profits double or triple what would have been expected without LIFO.

"If we have to pay taxes on these profits," says one warehouser, "it will be close to catastrophic. Our working capital will be wiped out when we need it most to rebuild inventory."

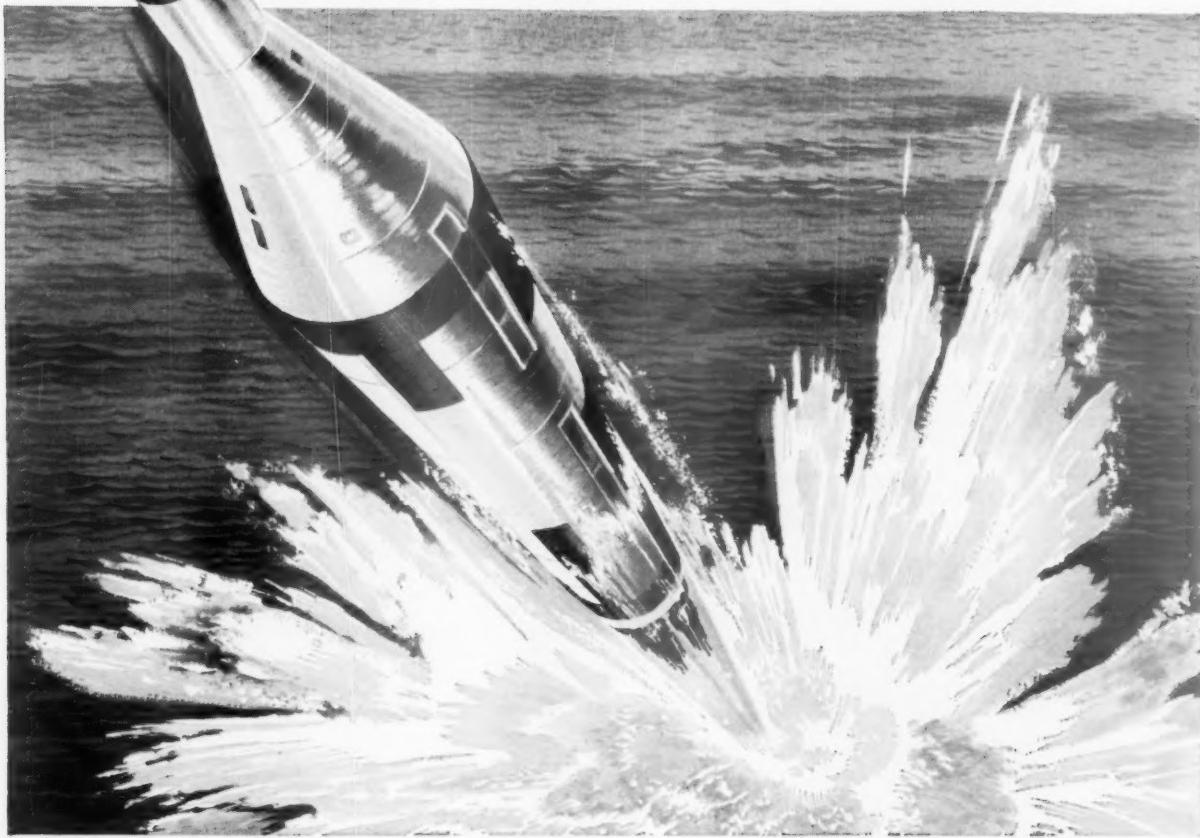
- **What to Do?**—It's against this background that companies are casting around for a way out of their fix. According to the big accounting firm of Arthur Andersen & Co., which has been studying the problem, there are three ways steel companies could avoid these taxes:

- Switch their tax year to end in September, when steel inventories were still fairly high. There are several hitches, however. Internal Revenue Service must be notified within two and a half months after the proposed closing date—that means a Nov. 15 deadline for switching back to Sept. 1. A company can make such a switch only once in 10 years. And if it's done obviously to avoid taxes, IRS may say "No."

- Buy up inventory like mad in the next month and a half—or merge with a company using LIFO that still has inventory on hand.

- Get Congress to exempt from taxation the windfall profits resulting

ENGINEERING BEYOND THE EXPECTED



©'59 PB

AWAKE IN THE DEEP

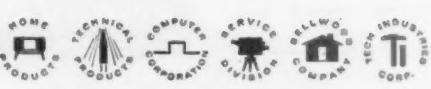
Soon American seamen aboard swift, nuclear-powered submarines will patrol "Awake in the Deep"...armed with the U.S. Navy's devastating POLARIS fleet ballistic missile. Should they be forced to enter unfriendly waters on a mission of retaliation, a Packard Bell "Digitizer" will play a leading role in the missile's underwater or surface launching. This is one of a series of electronic production and pre-launch check-out devices developed by Packard Bell Electronics for the Missiles and Space Division of Lockheed Aircraft. It is a militarized version of commercial equipment created through company sponsored research...another Packard Bell achievement based upon 34 years of "Engineering Beyond The Expected" for the home, industry and national defense.



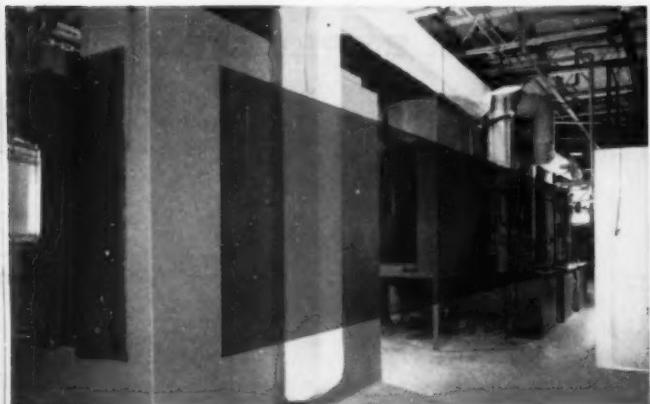
To engineers of exceptional ability and earning power
Packard Bell offers opportunities beyond the expected, too.

Packard Bell Electronics

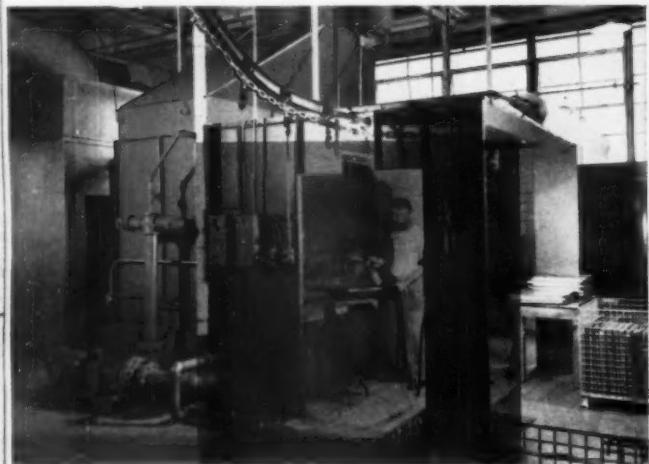
LOS ANGELES 64, CALIFORNIA



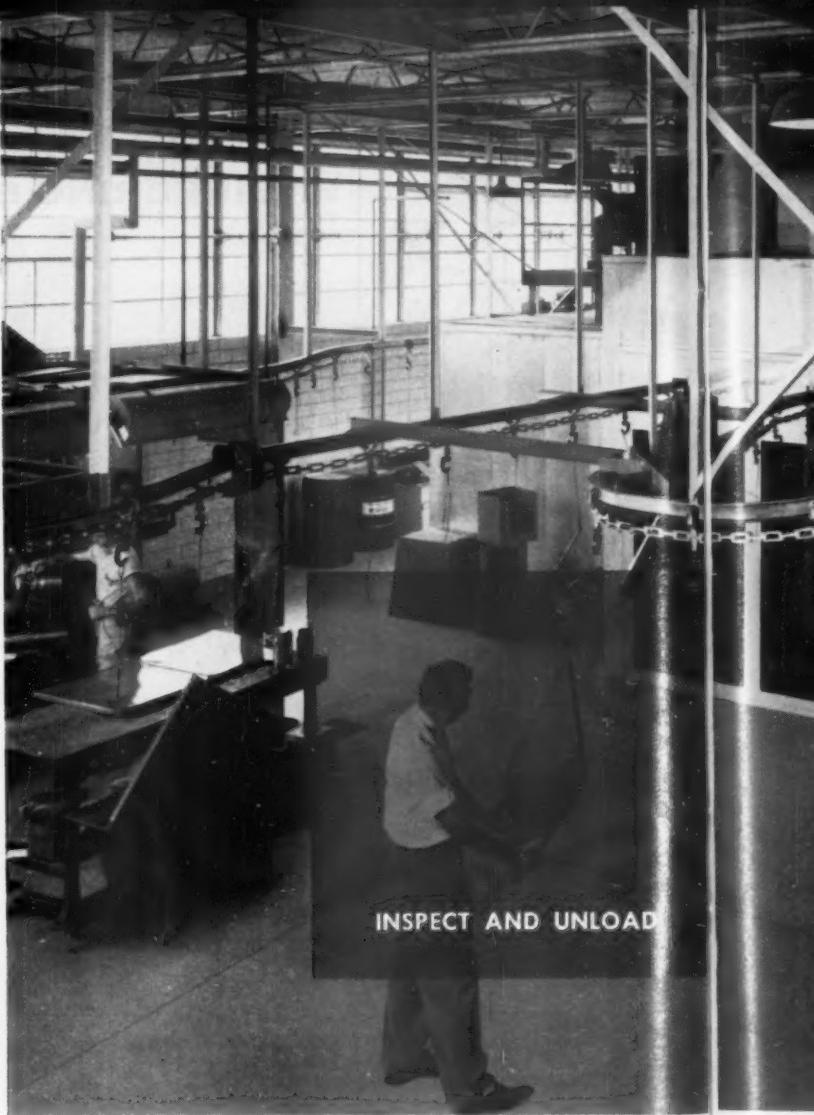
DeVilbiss Complete Finishing Systems



After automatic 3-stage power-spray cleaning and phosphate treating, units travel through dry-off oven, on the left.

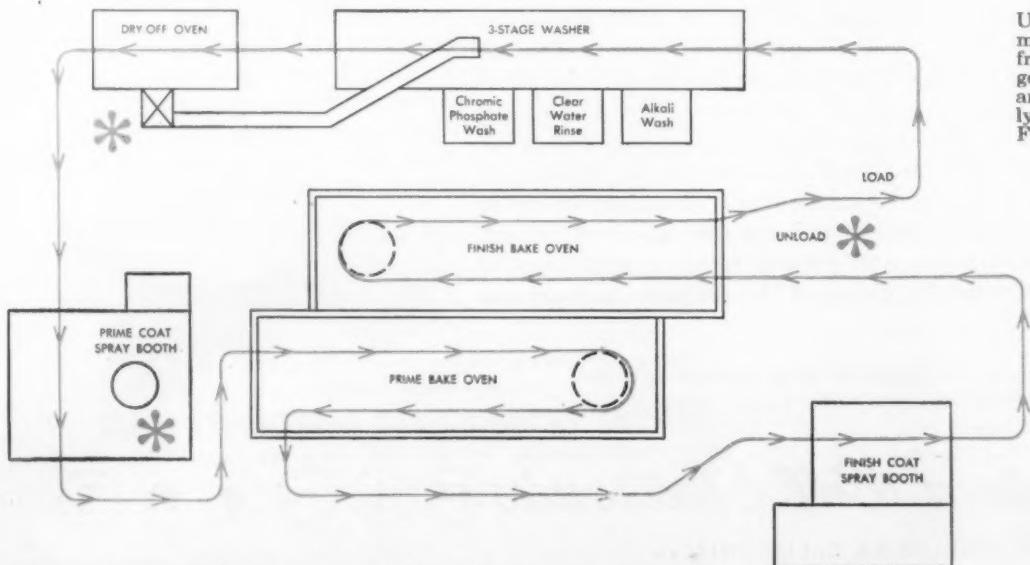


Both prime and finish coats are applied manually with DeVilbiss spray guns. Shown here: prime coating in water-wash booth.



INSPECT AND UNLOAD

The system occupies less than 3200 sq. ft.; includes cleaning, and application and bake of both prime and finish coats.



Here's the layout. With conveyor speed of 3 ft./min., 90 units complete the cycle every hour. Water-wash booth with turntable, and a conveyorized dip operation for miscellaneous parts supplement the main system shown.

Uniformity of finish is a must at Fisher. "Panels from many separate runs go into cabinets like this, and must match perfectly," says Chief Engineer Frank Skowron (left).



How to coat 16,000 shapes and sizes with speed and precision

That was Fisher Scientific Company's problem . . . and here's the DeVilbiss system that solved it

A laboratory is a complex of strange shapes . . . of equipment specialized to the *n*th degree.

Even so, it is astonishing to realize that the Instrument Division of the Fisher Scientific Company turns out a total of *80,000 separate components* in manufacturing the world's most comprehensive selection of scientific instruments, apparatus, and laboratory furniture.

Of these, about a fifth (16,000) get protective coatings . . . and the heart of Fisher's finishing department for this vast array of parts is the DeVilbiss conveyorized system you see here.

DeVilbiss worked closely with Fisher engineers to develop this remarkable new system. It has been in service for over a year, applying precision coatings that resist the powerful corrosives in laboratory use. It has proved its efficiency by absorbing the plant's continually increasing production load without a hitch.

With the industry's most complete line of surface-preparation and coating and finishing equipment to draw on, DeVilbiss can supply you with matched components in a system tailored to your particular requirements. It is the one "single source" fully qualified to analyze your needs, then let you select the best, most economical product combination to fit your job. May we serve you?



THE DEVILBISS COMPANY, TOLEDO 1, OHIO
Barrie, Ontario • London, England • São Paulo, Brazil
Branch Offices in Principal Cities

FOR BETTER SERVICE BUY

DEVILBISS



INDUSTRIAL POWER WASHERS •
OVENS • DUST COLLECTORS • MIST-
COOLANT UNITS • SPRAY EQUIP-
MENT • HOSE & CONNECTIONS •
FLOW & DIP COATERS • SPRAY
BOOTHS • AIR COMPRESSORS



MONEY... PACKAGED TO ORDER

Modern products must go to market "dressed to sell"—wrapped, for instance, by efficient packaging equipment like the machine above. Money needs expert packaging, too—packaging designed for a specific purchase.

Whether you are buying packaging machinery, machine tools or any other type of income-producing equipment, C.I.T. Corporation "wraps up" financing to fit your needs.

C.I.T. terms are long—with all payment schedules custom-built to your specific buying program. If you

choose, you can use long-term C.I.T. Pay-As-You-Depreciate financing. PAYD Plan payments parallel the equipment's efficiency and money-making ability... larger in the early years... lower in the later years.

C.I.T. Corporation financing is always designed with your particular purchasing problem in mind. For complete details, write or call any office listed below.

C.I.T. Corporation is a subsidiary of C.I.T. Financial Corporation; capital and surplus over \$300 million. In Canada: Canadian Acceptance Corporation Limited.

Atlanta 3 • Boston 16 • Chicago 1
Cleveland 14 • Dallas 1 • Denver 3 • Detroit 26
Houston 25 • Jacksonville 7 • Kansas City 5
Los Angeles 14 • Memphis 3 • Minneapolis 2
New York 16 • Philadelphia 2 • Pittsburgh 19
Portland 4, Ore. • San Francisco 4 • Seattle 1



...the feeling among steelmen is that there's definitely a cash shortage ahead...

(STORY on page 65)

from involuntary liquidation of LIFO inventories. There's considerable precedent for this in special relief passed during World War II and Korea. Rep. Noah Mason (R-Ill.) has introduced a bill that would give steel warehousemen the help they want, but Treasury officials say they haven't yet formed an opinion about it.

Steel companies—both warehousemen and producers—say it's unlikely they would switch tax periods or go on wholesale merger sprees. "These are fundamental decisions," says one steelman. "We're not going to let a temporary tax bind force us into them."

- **Cash Drain**—So, unless Congress is willing to go along, all this points to a substantial cash drain on some steel companies—particularly the warehousemen. On top of the tax drain, there will be a second drain from rebuilding depleted inventories at what are likely to be substantially higher costs.

There's a third cash drain, too, arising simply from 18 weeks of strike. True, steel companies went into the strike unusually well-heeled with cash; but as third-quarter steel earnings reports show, expenditures rose while receipts tumbled.

Finally, as the mills start to roll again, there will be an inevitable lag between the time products are shipped and customers start paying bills. While these accounts receivable are building up and heavy start-up expenses are mounting, companies will certainly have to draw down liquid resources.

- **Who'll Be Hit?**—The feeling among steelmen is that there's definitely a cash shortage ahead, with drain from taxes on LIFO profits heading the list of causes. Except for smaller, independent warehousemen, though, it's not expected to be a serious problem.

Warehousemen may be forced en masse to their bankers for funds to tide them over, but the big producers don't expect any difficulty. For one thing, producer inventories—particularly the big ore stocks—won't be seriously depleted this tax year. And direct strike losses should offset the impact of paper LIFO profits.

Nevertheless, some observers recall that in the 1949 steel strike—which lasted only from Oct. 1 to Nov. 12—U.S. Steel's profits were boosted by \$17-million through involuntary liquidation of LIFO inventories. This raised Big Steel's federal income tax bill for the fourth quarter of 1949 by \$7-million. "The same thing could happen this time," says one steelman. END



Hummed to sleep—at nearly 600 miles per hour!

Johns-Manville Fiber Glass insulations cut sound to a whisper... keep cabins warm, too!



Sit anywhere in a giant new jetliner and you're within yards of the powerful engines. Yet cabin sound is at the whisper level!

You're comfortable, too, with never a thought of subzero temperatures outside. Here, in sound absorption and heat

control, are two ways J-M Fiber Glass insulations serve the aircraft industry.

There are J-M blanket-type insulations fabricated to manufacturers' specifications for between-frame or over-frame installations and available with a number of vapor barriers and interior trim facings. J-M Fiber Glass is also supplied as precision-molded panels for cabin interiors . . . designed for fast, simplified

installation, or removal for inspection.

Johns-Manville also produces top-quality Fiber Glass insulations for industrial and commercial construction, industrial and transportation equipment, appliances, and many other applications.

For information on J-M Fiber Glass or other J-M insulations—write to Johns-Manville, Dept. B-6, Box 14, N. Y. 16, N. Y. in Canada, Port Credit, Ontario.

JOHNS-MANVILLE
Fiber Glass

JOHNS-MANVILLE
JM
PRODUCTS



Major cost problem solved!



How do *your* material handling costs stack up with the national average of U. S. Industry? Surveying all manufactured products, current figures show:

"Materials handling takes at least one out of every four of the dollars it costs to manufacture our nation's products!"

We wouldn't repeat this disconcerting fact if we had no sound solution to offer you. But we do—because the most logical way to increase profits today is by lowering the cost of handling operations with the help of efficient Towmotor Fork Lift Trucks.

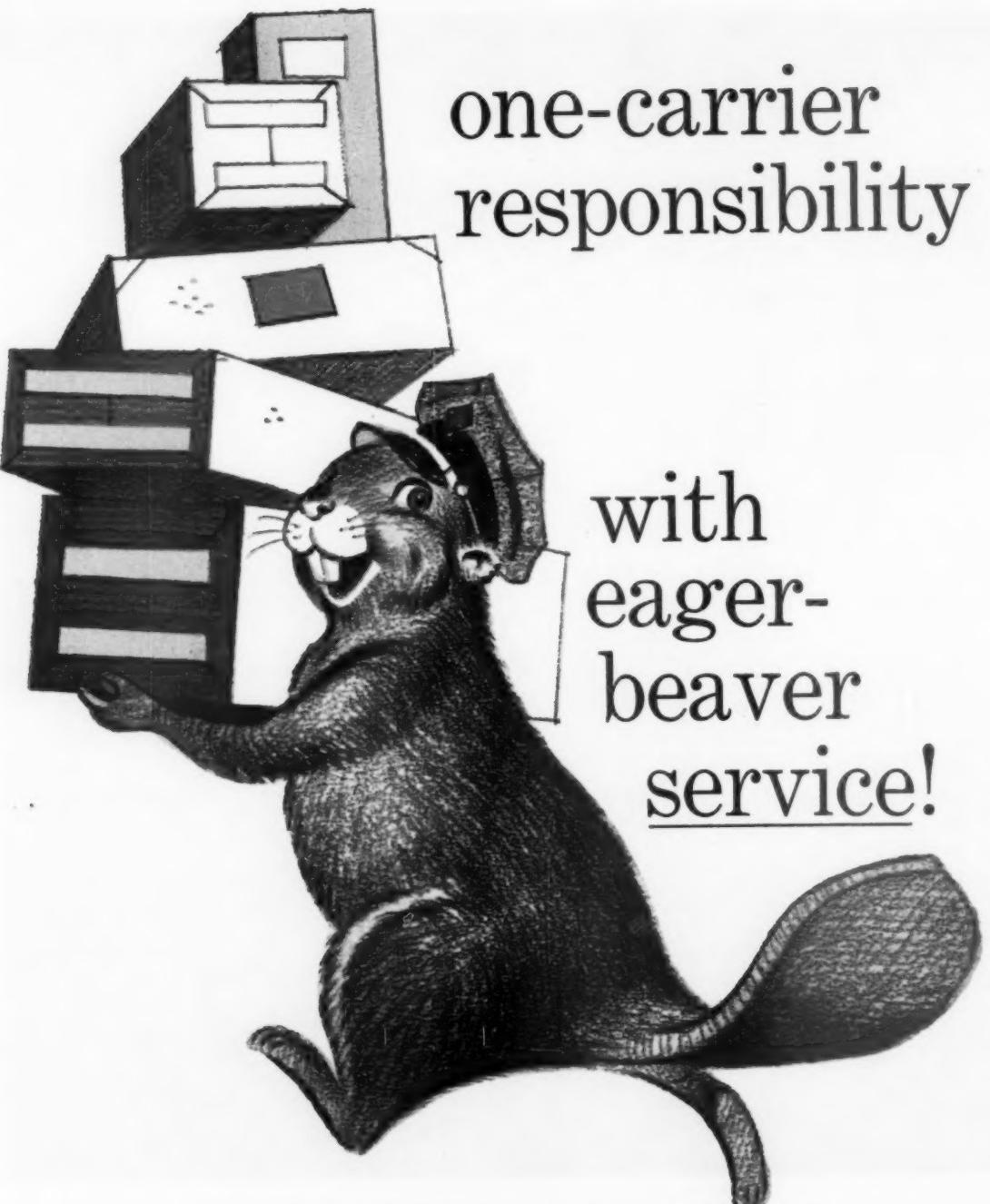
Want proof? Let us send you on-the-job studies applying to your specific handling needs . . . current facts and figures most convincing! Ask for *Certified Job Studies* relating to your own business—and *Pace-Maker Booklet No. SP-23* describing latest Towmotor equipment. Write Towmotor Corporation, Cleveland 10, Ohio.



-GERLINGER

LEADERS FOR 40 YEARS IN BUILDING
FORK LIFT TRUCKS, CARRIERS AND TRACTORS

Gerlinger Carrier Co. is a subsidiary of Towmotor Corporation



one-carrier responsibility with eager- beaver service!

It's the simplest way to ship. When you deal with Railway Express, you deal with *just one* carrier. You can depend on Railway Express all the way, from origin to destination. And you receive a *single bill* for everything. But—that's only one reason for shipping Railway Express. Take a look:

- Nationwide coverage to 23,000 communities in the U.S.
- International service to almost anywhere in the world
- Door-to-door delivery at no extra charge (within authorized limits)
- Lower rates on certain shipment aggregations of 300 lbs. or more
- Special low rates on many other commodities
- The kind of transportation that best suits your particular needs

This all adds up to service no other organization can match. And—with our new long-range planning well underway—we're able and eager to give your shipments the service you want. Call Railway Express and see!



RAIL • AIR • SEA
HIGHWAY

In Finance

Crowell-Collier Buys Macmillan Shares; Companies Expect to Work Together

Two of the nation's big, well-known publishing houses got closer together this week when Crowell-Collier Publishing Co. bought 50,000 unissued common shares of Macmillan Co.—over 15% of the stock outstanding—for \$2-million. In addition, Armand Erpf, Crowell's executive committee chairman and a partner in Carl M. Loeb, Rhodes & Co., is expected to become a director of Macmillan, while George Brett, Macmillan's board chairman, will join Crowell's board.

Although officers of both companies denied a merger was in the works, they said that there were "broad areas" in which they could work together in joint-manufacturing operations and retailing. Crowell, which depends mainly on door-to-door selling of reference books and encyclopedias, said that its purchase was part of an overall expansion plan.

Investment Group Asks New Hearing On Invalidation of New Haven RR Deal

The investment banking group whose 1955 deal with the New Haven RR was recently invalidated by the U.S. Court of Appeals (BW—Nov. 7'59, p160) said this week that it will petition for a rehearing in the U.S. Circuit Court. The bankers, headed by A. C. Allyn & Co., had bought 131,000 New Haven preferred shares for \$60 a share with the understanding that the railroad would repurchase them between this Nov. 18 and Dec. 18 at \$75 a share. Currently the stock is selling around 12½.

The group is basing its petition for a rehearing on the narrow issue on which the court upheld the Interstate Commerce Commission's objections to the deal—namely that the four-year-old repurchase agreement constituted a "new issuance of securities." The group's lawyers are expected to argue that insufficient weight was given by the court to the difference between this agreement and earlier "new issue" cases in which the ICC was upheld.

IMF Sells Gold to U.S. to Get Dollars for Short-Term Investment

The International Monetary Fund last week sold \$100-million in gold to the U.S., bringing about this year's first sizable jump in the nation's gold stock (at \$19.5-billion, it is still \$1-billion below the start of the year and \$3.3-billion below the start of 1958). Officials denied that the move was made to bolster foreign confidence in the dollar, though it looked like that.

IMF's earnings have suffered lately as an indirect result of the increase in the amount of capital that member

countries are obliged to put into the fund's pool. Countries that borrow from IMF pay no interest on loans that are less than 25% of their quotas. The boost in quotas (which are determined by capital contributions) in some cases relieved countries of the obligation to pay IMF any interest.

To make up for loss of this interest, IMF traded gold—which earns nothing—for dollars for investment in interest bearing U.S. Treasury bills. IMF's gold stock, resulting from member country contributions, now stands at a record \$2.5-billion. In the light of the strength shown by so many national economies, the fund sees no reason today to keep such a large reserve. It is allowed to put \$500-million of its gold into governments, and its latest conversion will bring its holdings of Treasury bills to this ceiling, and will give it about \$4-million in interest a year.

Meanwhile, the U.S., which expects a \$4-billion deficit in international transactions this year compared with \$3.4-billion last year, got a helping hand from Europe. Britain paid a \$250-million debt to the U.S. Export-Import Bank ahead of time, easing the U.S. problem a bit. Other members of the Organization for European Economic Cooperation may do likewise; they are flush with foreign exchange reserves.

Lehman Bros. Out of Texas Trust Case

Lehman Bros., a New York investment banking firm, was dropped from a Texas antitrust suit last week, after it agreed to (1) sell all its Texas Pacific Coal & Oil Co. stock in the open market within 120 days and (2) refrain from repurchasing the stock for five years or attempting to gain control of the company.

Lehman and Sinclair Oil Co. were charged last January with trying to acquire more than \$40-million of Texas Pacific's stock in order to effect a merger with Sinclair. The state said it will continue to press the case against Sinclair under its antitrust and monopoly laws.

Finance Briefs

Even though there are still six weeks to go in 1959, the number of stock splits has already hit an all-time high. Standard & Poor's Corp. reports that splits so far this year total 231, well above the earlier peak in 1955 of 181, and nearly four times the 63 approved in 1958.

Chrysler Corp. went on record again last week that it would enter the car financing field "should it become necessary to do so." B. J. Nichols, Chrysler vice-president, reiterating the company's position made public last February before a Senate committee probing Ford's entry into the field, said "we must explore every possibility . . . that could strengthen our competitive position." Nichols added that Chrysler had set up new departments to study dealer and customer financing.

Two more states—Illinois and Kentucky—are moving to impose maximum premium rates on sales of credit life insurance. Credit life insurance, which guarantees that an unpaid loan balance will be paid if a borrower dies while owing a balance, has been under fire in a number of states lately (BW—Sep. 26'59, p47).

INDUSTRIES

Capital Spending Heads Back

MANUFACTURING

spending is set for a LEAP

MILLIONS OF DOLLARS	1958 ACTUAL	1959 ESTIMATED	1960 PLANNED	1959-60 PERCENT CHANGE	1961 PRELIM- INARY PLANS
Iron & Steel	\$ 1,217	\$ 949	\$ 1,670	+ 76%	\$ 1,169
Nonferrous Metals . . .	510	347	357	+ 3	350
Machinery	915	951	1,161	+ 22	1,129
Electrical Mach.	459	477	582	+ 22	559
Autos, Trucks & Parts .	558	647	841	+ 30	791
Transp. Equip.					
(aircraft, ships, RR equip.)	370	363	399	+ 10	359
Other Metalworking . .	723	880	875	- 1	844
Chemicals	1,320	1,188	1,473	+ 24	1,502
Paper & Pulp	578	613	828	+ 35	704
Rubber	134	178	233	+ 31	247
Stone, Clay & Glass . .	399	542	603	+ 11	594
Petroleum Refining . .	665	692	754	+ 9	814
Food & Beverages	742	794	783	- 1	737
Food	566	630	610	- 3	606
Beverages	176	164	173	+ 5	131
Textiles	288	343	361	+ 5	350
Misc. Mfg.	883	1,061	1,037	- 2	1,022
ALL MANUFACTURING	9,761	10,025	11,937	+ 17%	11,171

Data: U. S. Commerce Dept., SEC, McGraw-Hill Economics Dept.

©BUSINESS WEEK

NONMANUFACTURING

will make a smaller GAIN

MILLIONS OF DOLLARS	1958 ACTUAL	1959 ESTIMATED	1960 PLANNED	1959-60 PERCENT CHANGE	1961 PRELIM- INARY PLANS
Petroleum Industry . . .	\$ 4,819	\$ 5,220	\$ 5,154	- 1%	\$ 5,077
Production	3,341	3,675	3,528	- 4	3,493
Transportation . . .	317	298	298	0	209
Refining*	665	692	754	+ 9	814
Marketing	404	469	502	+ 7	502
Other	92	86	72	- 16	59
Mining	394	415	395	- 5	297
Coal	155	129	116	- 10	111
Iron Ore	47	66	102	+ 55	71
Nonferrous	123	165	140	- 15	78
Nonmetallic	69	55	37	- 33	37
Railroads	754	822	904	+ 10	1,012
Other Trans. & Com..	3,899	4,362	4,992	+ 14	4,491
Elec. & Gas Utilities..	6,088	5,876	6,066	+ 3	5,768
Commercial	7,041	7,886	8,596	+ 9	7,564
Nonmanufacturing(1)	33,830	33,889	33,293		

*(1) Nonmanufacturing total excludes petroleum refining, which is included in the manufacturing total.

Data: U. S. Commerce Dept., SEC, McGraw-Hill Economics Dept.

Business' spending for new plant and equipment will jump 10% next year, not far short of the peak set in 1957, McGraw-Hill's survey shows.

Industry's capital spending is set for a solid 10% jump next year.

Better than \$37-billion will be put into new plant and equipment in 1960, and just about every major industry will contribute to the gain.

And for 1961, business already has plans to spend \$34.6-billion on new plant and equipment. By this time next year those plans are likely to be a lot bigger.

This year, though, capital spending hasn't kept up to the pace originally anticipated. It has been held down mainly by the steel strike and the material shortages it caused. Spending deferred from this year to next has contributed to 1960's 10% gain, thus spreading the revival of business spending over a longer period. But much of the coming gain is real increase, not borrowed from this year.

• More Coming—These are the major conclusions you can draw from McGraw-Hill's new capital spending survey. The survey, made at the start of the industrial budget season, covers business' preliminary plans. In good business years, final budgets for plant and equipment generally turn out to be larger than the preliminary plans. This year especially, because advance plans are influenced by steel shortages and uncertain construction schedules, final budgets are likely to be bigger. The next McGraw-Hill capital spending survey—due in the spring—will show the size of those changes.

I. Impact of the Strike

This year, the steel strike has hit mostly at the spending plans of the manufacturing industries. On the average, companies in these industries put some 4% less than they had anticipated into new plant and equipment.

The average hides some sharp declines. Steel itself had planned to spend almost \$1.2-billion. But picket lines kept construction workers out of the closed mills. So steel's spending is likely to wind up this year at about \$949-million, some 20% less than planned. Transportation equipment makers had planned to spend \$440-million, but chiefly because the steel strike pushed down orders for railroad freight cars, they will wind up with about 17% less. Electrical machinery makers will

Toward Its Peak

put 10% less into plant and equipment. Non-ferrous metals producers, caught chiefly by the copper strike, will spend almost 20% less than planned.

• **Steel's Big Goal**—It's among most of these industries that spending deferred from this year will add to increases in plant and equipment investment next year. The steel industry, for example, now schedules more than \$1.6-billion for capital spending in 1960. That's almost as much as it spent in the great boom year for capital investment of 1957, and it's 76% more than the industry has spent this year. But a better guide to recovery from recession is that steel's spending program for next year is 37% larger than in 1958.

The after-effects of the steel strike may make this a difficult target to reach. The steel mills will probably be pushing for maximum output during at least the first half of next year. In the face of that, it won't be easy for the mills to replace equipment at the rate they schedule, for replacement often demands that some production capacity be shut down.

Steel, because of its special troubles, is the extreme case. Despite shortages and upset construction schedules, almost every other industry put more into plant and equipment this year than in 1958—and, of course, is planning still more for 1960.

II. Where Big Gains Lie

Both the chemical and machinery industries plan to spend well over \$1-billion on new facilities in 1960, each plan calling for at least 20% more investment than this year. The paper and pulp industry is leaping out of the recession during which it was heavily overloaded with production capacity; it will boost capital investment 35% next year. Automobile and truck makers have optimistic sales forecasts and these, combined with their modernization programs, will push their spending 30% higher next year.

Electrical machinery makers, always seeking more use of new production techniques to save costs, schedule a 22% gain next year in plant and equipment spending. Some of this will make up for their smaller than anticipated spending program this year.

• **Sixty's Sales**—The basis for much of this added spending is, of course, optimistic sales forecasts. Every manufacturing industry expects a better year in 1960.

The steel industry, closed for more than a quarter of this year, naturally expects to boost sales next year as steel users replenish their now far-depleted

stocks. The auto makers with their production hampered—and in General Motors' case, shut down—for lack of steel expect 15% more sales next year.

Spurred on by the new products and new processes that come from constantly increasing industrial research, every other manufacturing industry surveyed also looks for bigger sales next year.

• **Small Dips**—Among the few manufacturers contemplating a dip in spending next year are metal fabricators and instrument makers (grouped under "other metalworking"). The dip is small—only 1%—and can probably be traced to the tightening rein the Administration is holding on defense spending.

III. Some Move Slowly

There's less steam in the spending plans of industry's non-manufacturing side. As a whole, non-manufacturing industries plan an increase of only 6% next year, compared with the overall manufacturing schedule of 19%.

The petroleum industry plans a small drop in its spending next year. It will put more into refineries and marketing, because the return from marketing is high and because in its refineries it must keep taking full advantage of new techniques and processes. But it will spend less next year on investment in new production equipment. That's to be expected, for during much of this year crude oil production in the big Texas fields has been held back to nine or ten days' a month.

• **Mining's Drop**—A larger dip is due in spending for new plant and equipment in most segments of the mining industry. Coal producers plan to spend 10% less than this year. Coal production is down this year, and so coal operators are trimming plans for opening new facilities next year. But iron ore producers plan another steep rise in their equipment investment next year to meet the insatiable demands of steel producers.

The railroads, though many of them have been hit hard by the steel strike, are catching up on modernization programs deferred during the recession. They hit a low of \$754-million in their capital spending last year, pushed up to \$822-million this year, and have scheduled a 10% increase next year. Already, their spending plans for 1961 total more than \$1-billion.

• **Jets' Impact**—Another big jump is due in the spending of other transportation and communications industries—airlines, bus, truck, and shipping lines, and telephone, radio and TV companies. Steady deliveries of jet airplanes to the

Next year, with less labor strife, business sees these boosts in SALES...

	PHYSICAL VOLUME 1959-60
Percent increase in sales expected	
Iron & Steel	25%
Nonferrous Metals	7
Machinery	11
Electrical Mach.	11
Autos, Trucks & Parts	15
Transp. Equip. (aircraft, ships, RR equip.)	4
Other Metalworking	7
Chemicals	9
Paper & Pulp	6
Rubber	7
Stone, Clay & Glass	7
Petroleum Refining	3
Food & Beverages	5
Textiles	8
Misc. Mfg.	7
ALL MANUFACTURING	9

Data: McGraw-Hill Economics Dept. ©BUSINESS WEEK

airlines will account for some \$1.1-billion of the almost \$5-billion these industries will spend next year—and for much of their 14% spending increase over this year.

The utilities business will spend more than \$6-billion for new plant and equipment next year to stay even with the burgeoning demand for electricity and gas. This is only a fraction less than the utilities spent in their boom year of 1957.

And there'll be one new record set: Commercial business—department stores, mail order houses, insurance companies, banks, and so on—will plow an extra 9% next year into plant and equipment. This will push their spending to almost \$8.6-billion, some \$400-million more than in their previous peak year of 1956.

IV. Funds for the Job

Next year's spending plans for all but commercial business total \$28.7-billion. As of now, the companies that plan to spend this expect to get about 80% of the funds needed for their plant modernization and expansion from internal sources—retained earnings and depreciation and depletion allowances. They estimate they will seek only a little more than \$6-billion in external financing.

(McGraw-Hill Economics Dept. excluded commercial business from this part of its survey because its sample

CASE PAYS BIG PROFITS...

IN CLEARING LAND



CASE 1000 DUMP

IN HANDLING CEMENT BLOCK



IN QUARRY OPERATIONS



Because of Product Leadership...

Sales of Case Industrial machines have increased over 500% in 3 years—ahead of any other major company in the industry.

CASE

J. I. Case Company, Racine, Wis.
Worldwide Sales and Service

To meet the bills,
industry will use
reserves, depre-
ciation, plus this
much from the
MONEY MARKET.

	External financing for capital spending (Millions of dollars)	1959 ESTIMATED	1960 PLANNED
Mfg. & Mining	\$790	\$781	
Petroleum Industry	108	87	
Railroads	304	299	
Other Trans. & Com.	1,507	1,922	
Elec. & Gas Utilities	3,110	3,265	
ALL BUSINESS*	5,819	6,354	

*Excludes commercial, real estate and financial companies

Data: McGraw-Hill Economics Dept. ©BUSINESS WEEK

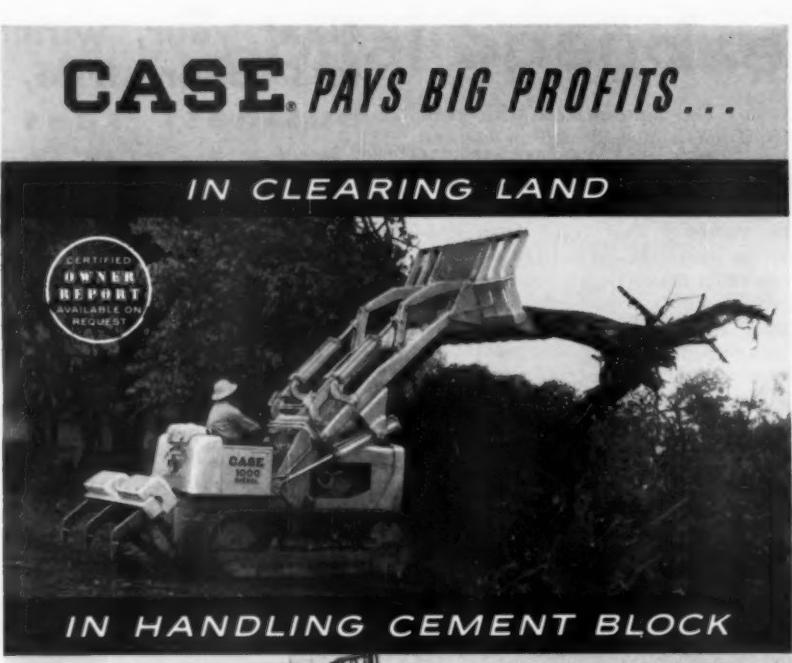
of commercial business covers only the larger companies and their financing plans are likely to be quite different from those of the thousands of smaller companies that also come under the heading of commercial business.)

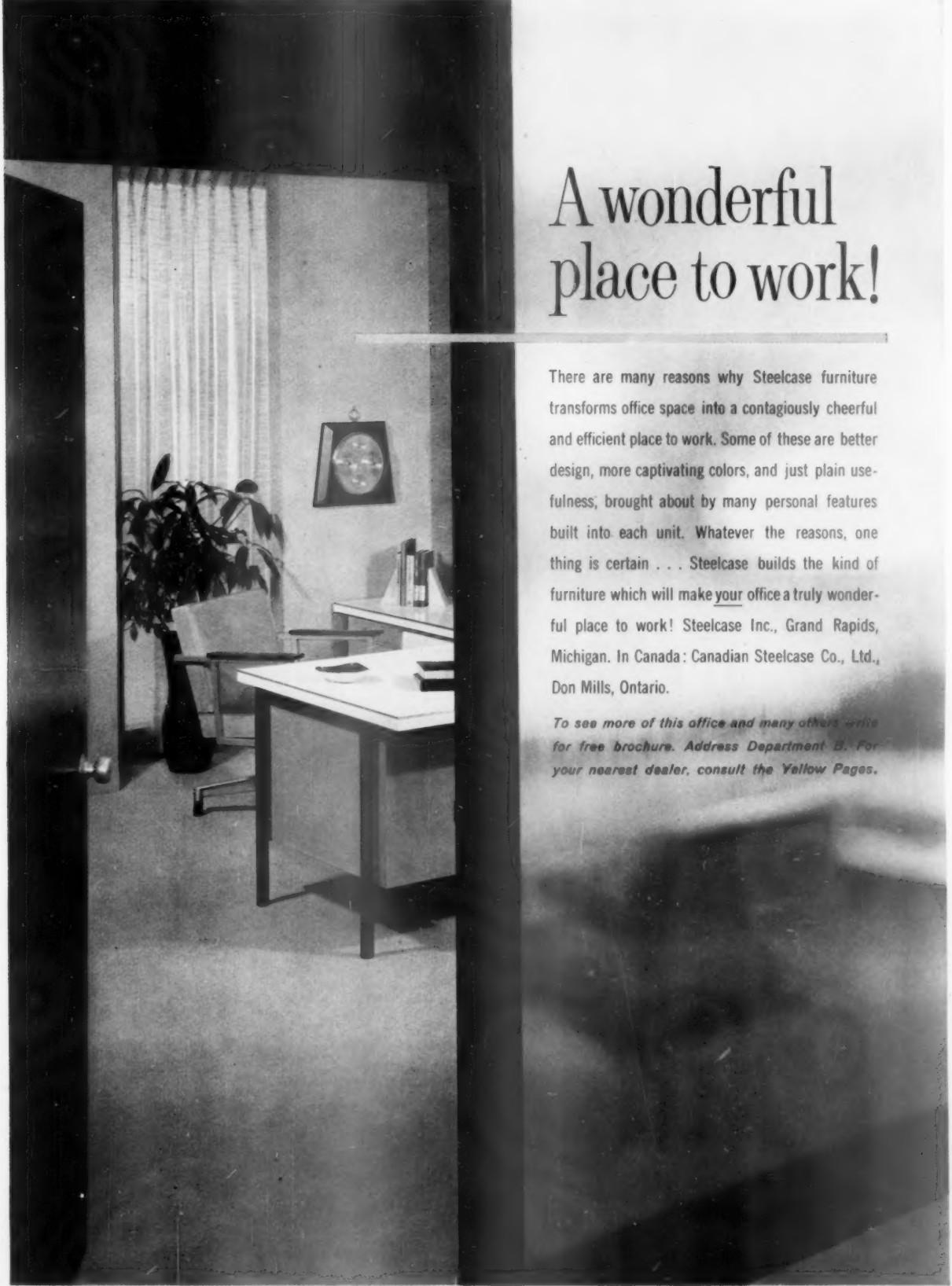
- **Low Guess**—Manufacturing companies say they expect to finance almost all their capital spending in 1960 from internal sources. At present they plan to raise less than \$800-million in the money market for new plant and equipment. (They'll seek more through new security issues for working capital.)

But in the past these companies have usually underestimated their need for outside funds. It's likely they're again underestimating their needs.

Many businessmen regard money rates as unnaturally high just now. But the rates are not likely to fall next year (BW-Sep. 26 '59, p25). And as businessmen get used to this they will probably go to external sources for more of their plant and equipment financing. Still, manufacturers' estimates would have to be increased radically to come anywhere near the \$3-billion they sought from the money market for 1957's round of capital spending.

- **More for Market**—Nonmanufacturing companies, naturally, shape their plans differently. Though the petroleum industry at present plans to finance nearly all its 1960 capital spending from internal sources, the utilities, railroads, and transportation and communications industries will go to the market for much of their modernization and expansion money. The utilities expect to get more than half their funds from the money market; the railroads, more than 30%; and other transportation and communications companies, about 40%. END





A wonderful place to work!

There are many reasons why Steelcase furniture transforms office space into a contagiously cheerful and efficient place to work. Some of these are better design, more captivating colors, and just plain usefulness, brought about by many personal features built into each unit. Whatever the reasons, one thing is certain . . . Steelcase builds the kind of furniture which will make your office a truly wonderful place to work! Steelcase Inc., Grand Rapids, Michigan. In Canada: Canadian Steelcase Co., Ltd., Don Mills, Ontario.

To see more of this office and many others write for free brochure. Address Department B. For your nearest dealer, consult the Yellow Pages.

STEELCASE INC



YOU LIVE WITH AVISCO FIBERS AND FILMS

Today, many of the finer things around the home are created with Avisco fibers or films. Lovely draperies and upholstery materials are Avisco rayon. Fluffy warm blankets? Avisco rayon again. Lush carpet is loomed from a new and special Avisco smooth carpet rayon. Dinner is served on an amazing new non-woven table cloth of Avisco rayon origin. Many products you enjoy at home reach you fresh in Avisco cellophane—from breakfast buns to cigarettes. Even the lamp shade is protected with cellophane. Yes, in the home or in the plant, American Viscose chemistry is always trying something new and people of the same view are always trying us. Will you be next?

AMERICAN VISCOSÉ CORPORATION

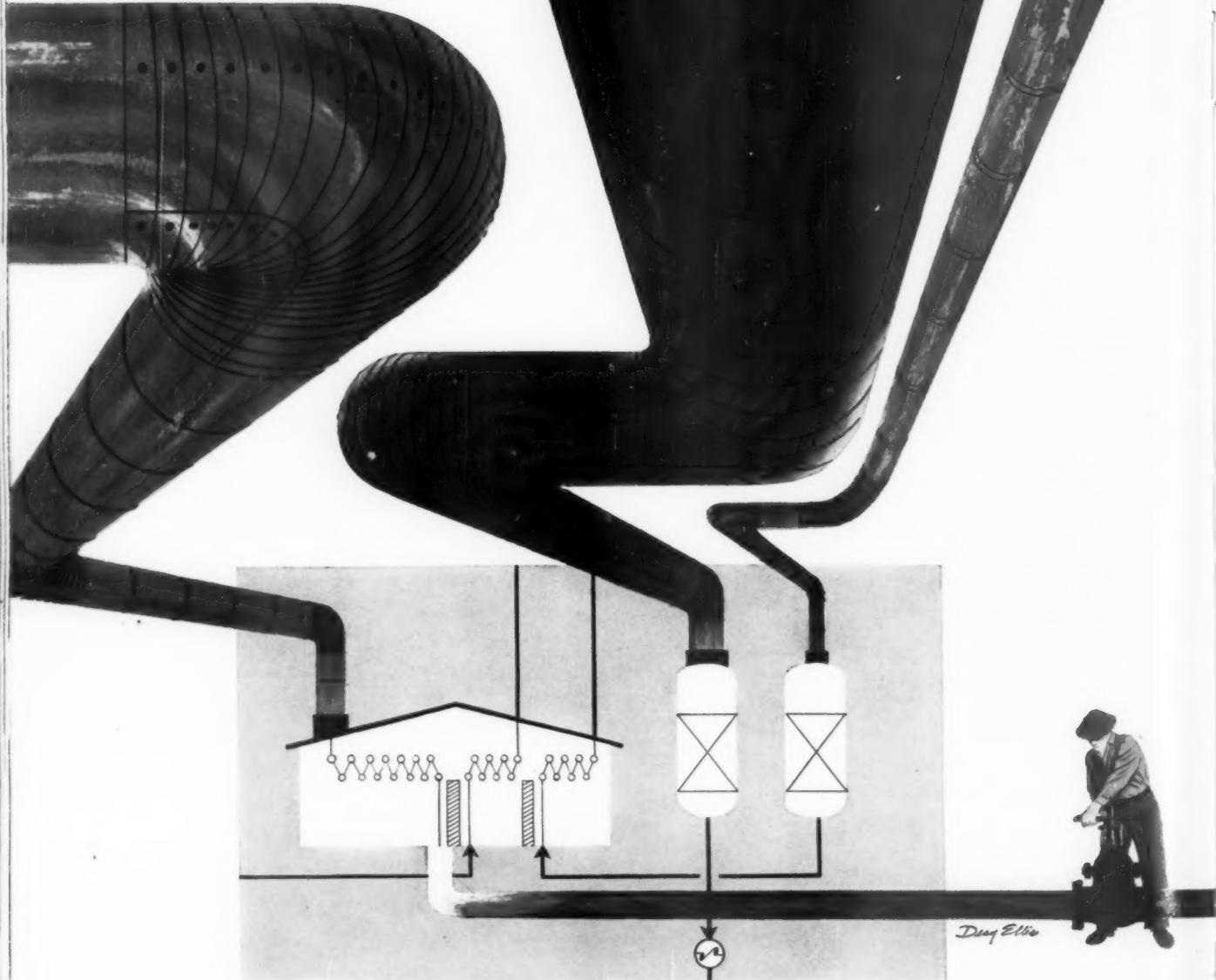
Philadelphia 3, Pennsylvania • New York 1, New York

Makers of rayon filament and staple fiber, viscose tire yarn, cellophane, acetate yarns, cellulose bands & casings, plastics
Associated Companies (50% Owned): Chemstrand Corp. • Ketchikan Pulp Co. • AviSun Corp.

AVISCO



LOOK TO **AVISCO** FOR NEW IDEAS
FIBERS AND PACKAGING FILMS



fast start-up...

when  *designs, engineers and constructs
your new process industry plant*

Over 50 years of world-wide experience on over 800 major installations for the process industries

THE LUMMUS COMPANY, 385 MADISON AVE., NEW YORK 17, N.Y. • WASHINGTON, D.C. • HOUSTON • MARACAIBO • MONTREAL • PARIS • THE HAGUE • LONDON



BIGGER sales are the key, say Esco Chmn. and Pres. W. H. Burgess (left), Senior Vice-Pres. B. H. Cisel, Asst. to Pres. C. R. Harmon.

How to Stay Alive in Electronics

Little Electronic Specialty Co. of Los Angeles piles up growth in a tough competitive struggle with a cloak-and-dagger side.

Some time in the next 90 days, Electronic Specialty Co. of Los Angeles will almost certainly conclude a merger with another electrical products or electronics company—and that will make its fourth acquisition in a year. The new acquisition may even be as big as Esco itself, which looks for sales for the current fiscal year ending Mar. 31, 1960, to mount up to \$11-million.

Because Esco ended its last fiscal year with sales of \$4.1-million, the rapid multiplication—both internal and external—may seem a bit startling for a company its size. (Its home-grown products are expected to show a 50% gain, the

rest of this fiscal year's growth coming from acquisitions.)

• **No Choice**—But this sort of growth is a matter of sheer necessity in the electronics industry today, according to Electronic Specialty's ruling trio (picture). It's necessary unless you have an unbelievably unique product, says Esco's 42-year-old chairman and president, William H. Burgess. The necessity arises because fewer weapons systems are being ordered, and fewer copies of any weapon (BW—May 16'59, p84).

"That means," chimes in Senior Vice-Pres. Benjamin H. Cisel, 43, "that you can no longer survive by making a few special components for thousands of airplanes or missiles. You've got to make more complete, more costly electronics packages for fewer numbers. And that calls for a bigger company."

C. Ray Harmon, 42, assistant to the president, adds that while there are, of

course, still all kinds of exceptions, the change from several years ago is marked. "Then," he says, "we thought there was room for any number of \$5-million and \$10-million companies in the electronics industry. Now it appears the figure should be \$50-million."

• **Slice of Life**—Esco's growth and development may not be the most spectacular in the electronics industry—though its performance is well above industry averages. But a look at Esco offers an interesting guide to life as it's lived in one segment of the electronics industry—among the hundreds of small companies that got started about the time of Korea. It gives a glimpse of how these companies survive—or don't—and how they manage to latch onto a life-giving share of business in a fiercely competitive struggle that often has its cloak-and-dagger aspects.

These companies, most of them,

Lightning-fast operation in a 135,000-square-foot warehouse...

"Our Dial-X System handles all our internal traffic automatically!" says Walter Zirpolo of Twin County Grocers Inc., Linden, New Jersey.

The pace of operation in the Twin County warehouse is lightning-fast, requiring instant communication between key people.

A Dial-X® private telephone intercom system by Stromberg-Carlson provides the answer. This automatic internal communication system, entirely independent of external telephone service, speeds work flow and results in better, faster service to customers.



*"There is nothing finer than
a Stromberg-Carlson"*

STROMBERG-CARLSON

...electronics' future may be perilous, but it can't be tougher than the past . . .

(STORY on page 83)

started with a single idea for a single product, built around a few key personnel. Some grew; some didn't; some merged with others. They are probably the least understood of the 4,000-odd companies that presently make up the \$8-billion electronics industry.

• **Pointing Ahead**—Electronic Specialty, for one, is due to become better known shortly, however. For in the first week of next month, it will list its stock on the American Stock Exchange.

Pointing toward the future they envisage, Burgess, Harmon, and Ciscel have freed themselves sufficiently from Esco's day-to-day operations to take charge of its growth. They will operate as a three-man task force to head the company toward the higher sales goal.

Burgess will look after financing, an area that's just as critical in the development of an electronics company as technical achievement (BW-Jun.16 '56, p74). Harmon will be the chief acquisition scouter. Ciscel will make sure the company is steering along the right path in technology.

Esco's projections for the future may sound rather flamboyant, but the trio is quite cold-blooded about them. Like the chorus girl who has become a star, they feel they have put in a rough and rugged apprenticeship. They have learned the ropes, often the hard way, in the electronics business, and established a base to build on. While the future may be just as perilous, they feel, it can't be any tougher than the past.

I. Trial and Error

None of the three was around when Electronic Specialty was founded in 1940 by David Marcus. During the war he made such equipment as intercoms for military training airplanes. After the war he tried to keep afloat by making aircraft radios and an electronic inverter called Shavex, which increased the speed and efficiency of electric shavers; but the going was tough.

It was in 1946 that he hired Burgess, then a young Navy lieutenant who had graduated from Harvard Business School a year before entering the service in 1942. Burgess steadily pushed up Shavex sales, but the radios were a drag. By 1949 net worth had plummeted from \$125,000 to \$9,000. Burgess, who had been hired at \$95 a week, took over the company, acquiring all the stock in return for an agreement to pay a royalty on Shavex.

• **Korea**—Korea marked a turning

...with DIAL-X® private telephone intercom by Stromberg-Carlson

Another major benefit is Dial-X's automatic round-the-clock service—a great aid to warehousing operations.

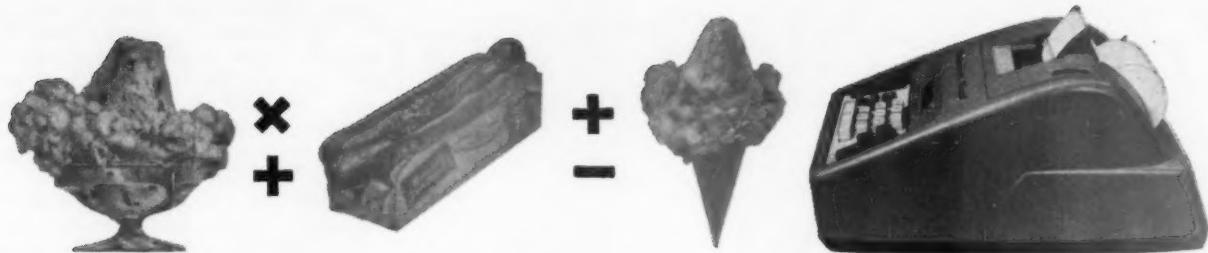
Whatever the nature of your business, there's a Stromberg-Carlson paging, intercom, background music or P.A. system to help boost your business efficiency. Find your local Stromberg-Carlson distributor in the Yellow Pages under "Sound Systems" or write to Special Products Division, 1412 North Goodman Street, Rochester 3, New York.



The fast-paced Twin County Grocers warehouse operates smoothly with the help of a Dial-X system. Installation by New Jersey Communications Corp., Kenilworth, New Jersey.

A DIVISION OF

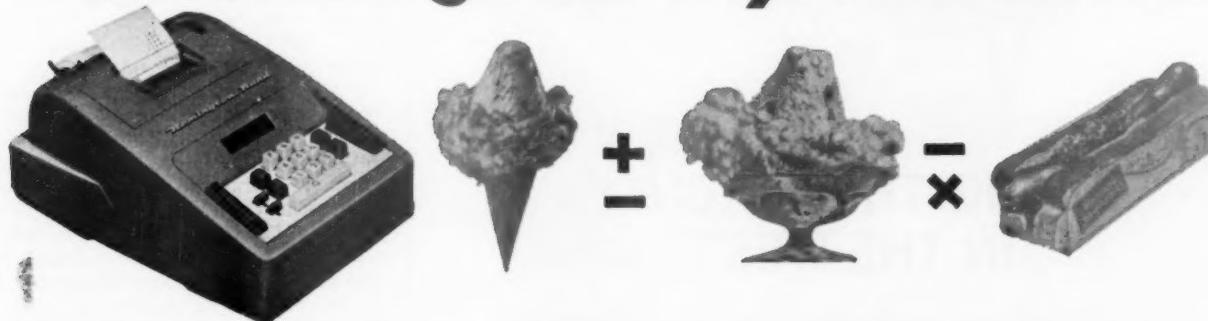
GENERAL DYNAMICS



How Remington Rand Adding Machines



help HOWARD Johnson's serve America



"REMINGTON RAND Adding Machines are as important to our restaurant and motor lodge operations as a good cook or smiling waitress," Mr. Howard Johnson says. "It takes a kettleful of figurework to keep millions of hungry Americans happy customers."

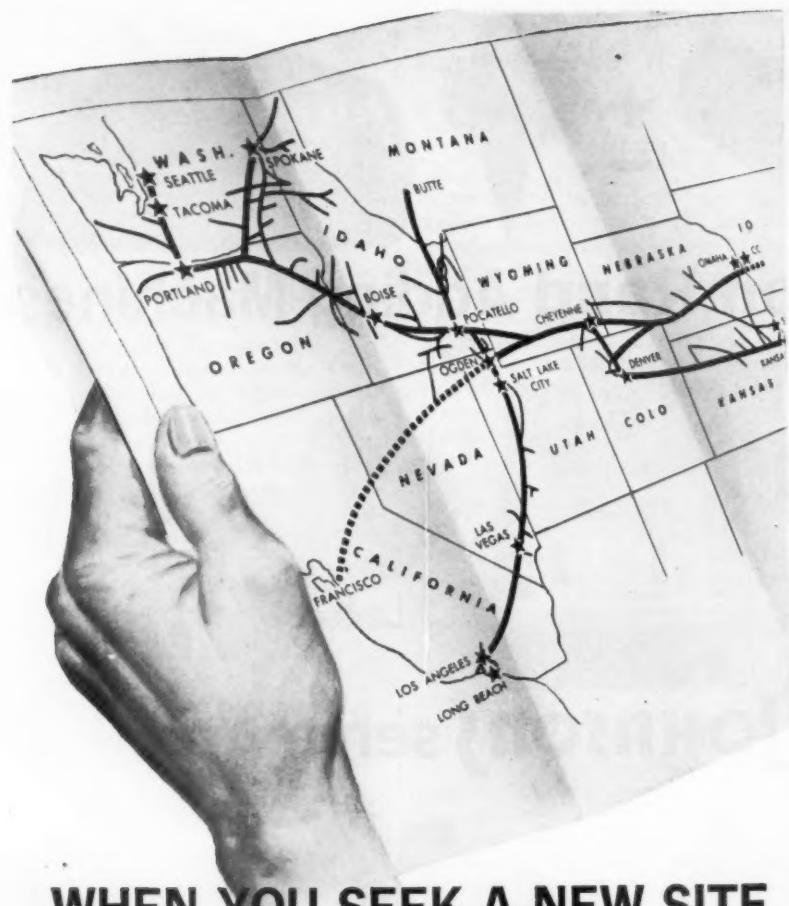
Hundreds of REMINGTON RAND Adding Machines are hard at work in Howard Johnson's restaurants and motor lodges. Hi-speed addition and subtraction reduce payroll figurework. Accumulative Multiplication simplifies invoice checking. Features engineered into a REMINGTON RAND Adding Machine:

Electric operation • addition, subtraction, short-cut multiplication • 10-key keyboard • answers printed in red • minus totals identified as credit (CR) • handspan keyboard • quiet operation • fatigue-easing design and colors.



Did you know you can buy a REMINGTON RAND Adding Machine for \$3.33 a week after a small down payment? Much less with trade-in. Contact your local Remington Rand Office or write for folder A1163, Room 2126, 315 Park Avenue South, New York 10, New York.

Remington Rand
DIVISION OF SPERRY RAND CORPORATION



WHEN YOU SEEK A NEW SITE ALONG THESE ROUTES IN THE WEST

As you study your opportunities in the West, and determine the general area for your new site, we welcome your inquiry on industrial locations.

Union Pacific has shared in the industrial growth of the West since rails first opened the territory.

Transportation is our business. Our experience with a large variety of industries and over a vast 11-state territory should be helpful to you as you plan your new location. A site strategically located for transportation may mean many advantages for your business.

Write, wire, or telephone

Industrial Development Dept.

UNION PACIFIC
Railroad
OMAHA 2, NEBRASKA

point. Burgess, while pursuing sales of Shavex vigorously, gradually edged the company into military electronics—a field that was then fairly simple to get into. "You just called in a good manufacturers representative and asked him to scout around and find out what items a small company could build."

Esco's first contract was for building a voltage sensitometer for the autopilot on the F-86-D fighter, made by North American Aviation. Military sales gradually increased until in the year ending Mar. 31, 1953, they matched Shavex sales—each with about \$600,000. In another year Shavex was left behind.

- **Too Far Afield**—Early in 1955, Burgess developed more working capital by selling off 30% of his stock for a net of \$255,000, and with this new money he decided to diversify. He took the path that many others in the electronics field then thought was the ideal route—to seek a balance between electronic sales to the military, to consumer markets, and to industrial markets.

He backed a developer of an unusual square-shaped hi-fi speaker, which became the focus of the company's Audio Pacific Div. Then he bought two-thirds interest in Electromec, Inc., which made instruments for industry.

"But I soon discovered the theory didn't work," says Burgess. "You are better off to have a diversification of products in one field, and concentrate on a single distribution organization, until you're large enough to have divisions that are self-sustaining."

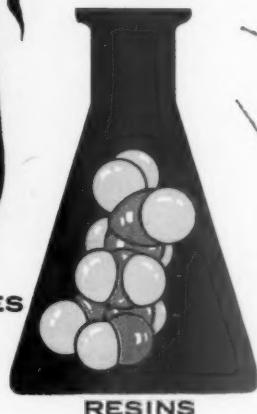
- **Concentrating**—At this point Harmon got into the picture. He came to Esco in May, 1955, from the presidency of Leach Corp., where he had completed a wringing out and expansion process and had boosted sales from \$2.5-million to \$9-million in three years (BW—Dec. 12 '53, p174).

Harmon's support quickly convinced Burgess that he was right in thinking that the "ideal" balanced diversification wouldn't work out in Esco's early stages. It would take too much capital to develop consumer and industrial electronics markets, and returns would be slow. Actually, after a quick look at the company's position, Harmon decided they were going broke.

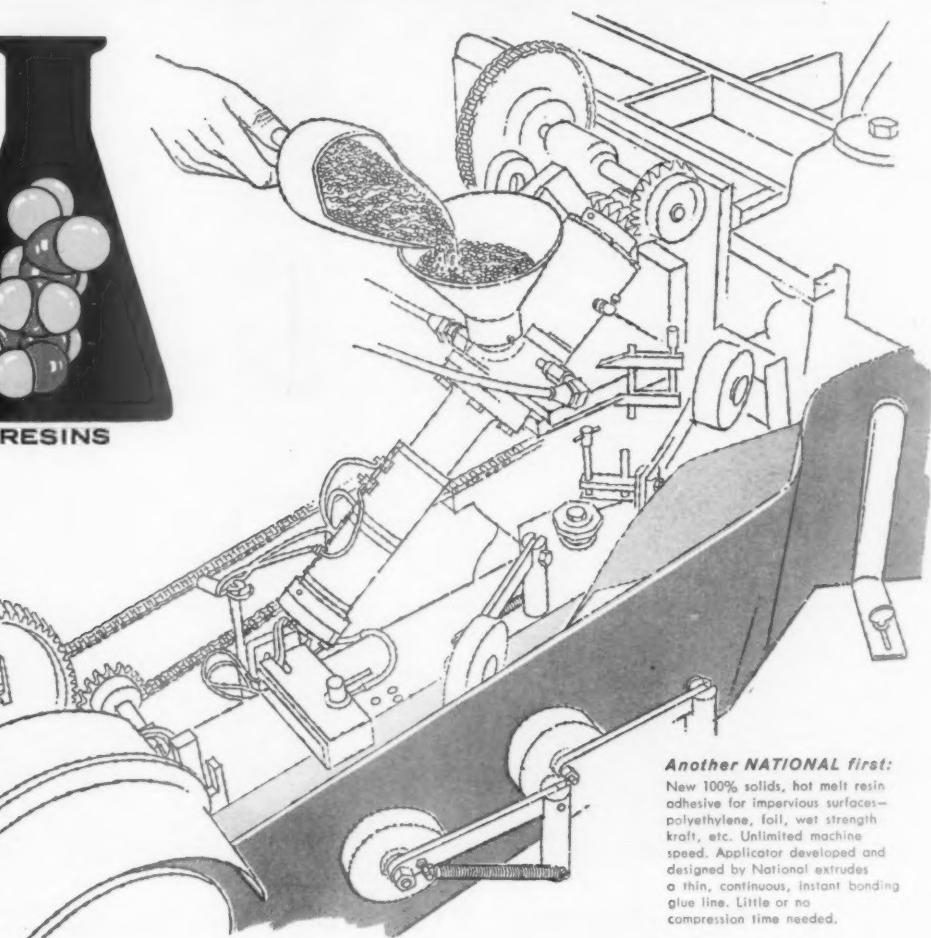
The best field for rapid development was military electronics, and this was where Burgess and Harmon decided to build their manufacturing competence.

II. On the Right Track

To get ready to exploit this field, they trimmed sales. Audio Pacific was liquidated, and a miniature components division sold off. In 1956, Shavex was converted into a separate corporation to develop separate operations figures, and a year later was sold to Dynamics Corp. of America. In



RESINS



Another NATIONAL first:

New 100% solids, hot melt resin adhesive for impervious surfaces—polyethylene, foil, wet strength kraft, etc. Unlimited machine speed. Applicator developed and designed by National extrudes a thin, continuous, instant bonding glue line. Little or no compression time needed.

Creates basic advances in **Package Making**

The genetic "cross pollination" of hybrid corn to produce unique strains . . . and the chemical "cross pollination" of corn starch to produce unique starch derivatives . . . plus "cross pollination" with vinyl acetate polymers and copolymers in emulsion form . . . have given NATIONAL complete flexibility of formulation in creating new and unique starch and resin adhesives for packaging.

That's one great advantage.

An even greater customer advantage is NATIONAL's un-

matched technical service. It's based on the "cross pollination" of our advanced thinking in adhesive research and our broad technical field experience.

This unique "cross pollination" of genetics, synthetics and advanced thinking has resulted in a wealth of know-how, not generally possessed by individual packaging companies.

NATIONAL's "cross pollinated" technical service is available for the asking . . . to help build product features that become decided competitive advantages for you.

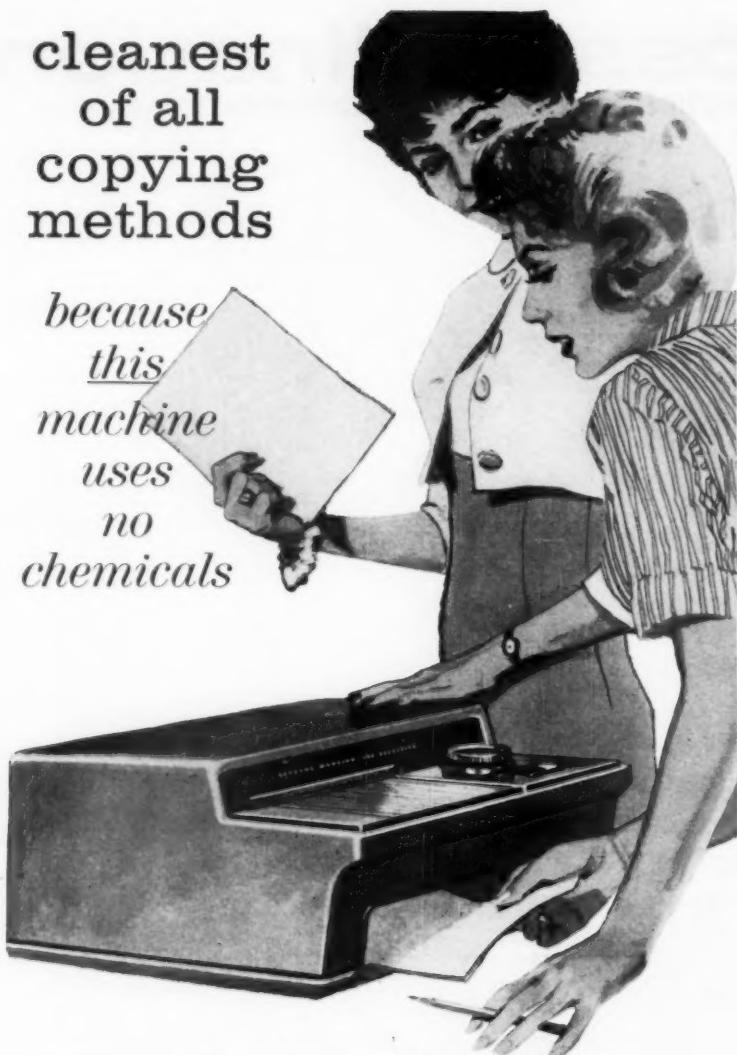
You'll find our
packaging adhesives—everywhere!

See us at PMMI & PI
New York City, Nov. 16-20

National
STARCH and CHEMICAL
CORPORATION
750 THIRD AVENUE, NEW YORK 17, N. Y.

cleanest of all copying methods

*because
this
machine
uses
no
chemicals*



Only "Thermo-Fax" Copying Machines do so many jobs...so quickly, so easily, for such low cost!

Here's the one copying machine that operates entirely by electricity—making it the cleanest, the simplest to use. No fussing with spilly chemicals. No time wasted making negatives before getting a copy.

In just 4 seconds your "Thermo-Fax" Copying Machine delivers a completely dry copy ready for immediate use. To learn how this fastest, simplest and cleanest of all copying methods can speed your work systems—including billing, accounting, labeling and addressing—call your local dealer. Or mail the coupon.

MINNESOTA MINING AND MANUFACTURING COMPANY . . .
WHERE RESEARCH IS THE KEY TO TOMORROW



THE TERM "THERMO-FAX" IS
A REGISTERED TRADEMARK
OF MINNESOTA MINING AND
MANUFACTURING COMPANY

MINNESOTA MINING AND MANUFACTURING COMPANY
Dept. DBA-11149, St. Paul 6, Minnesota

Name _____

Company _____

Address _____

City. _____ Zone. _____ State. _____

1956, also, Esco bought the remaining one-third interest in Electromec, then sold this company off, too, to Federal Telephone & Radio Co.

This left Esco stripped for action, with its working capital increased by \$400,000 from the sales of Shavex and Electromec. Its funds could now be applied to accelerated expansion of electronics products for the military.

"We could, of course, have become a subcontractor in the electronics business, simply using our manufacturing facilities to make somebody else's designs," says Burgess. "But we decided the way to grow was to develop our own packages of airborne equipment."

- **First Step**—From his work at Leach, Harmon knew that in military electronics you have to establish first a background of experience in components. Esco would have to concentrate on establishing itself as an expert in specific lines.

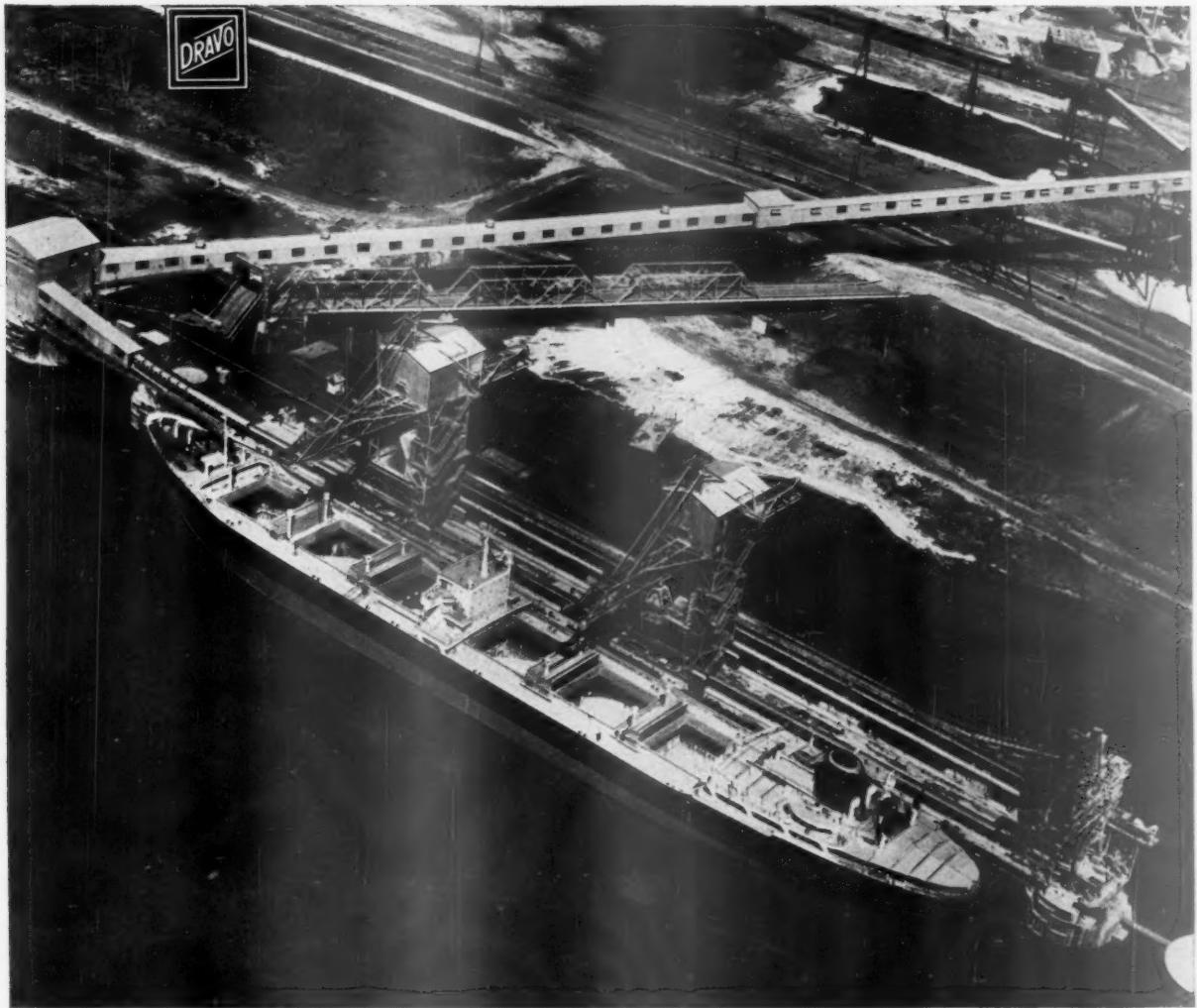
One line that Esco picked was the field of electronic timers—devices that control the sequence of actions such as, in launching missiles from a plane, the successive steps of opening the doors, dropping the launcher, and firing the missile. In four years, Esco has become the largest manufacturer of electronic timers.

- **Aim**—Though the plan was pretty fuzzy at first, Burgess says the philosophy the company set itself from the outset was to develop any product that had a sales potential of at least \$100,000 a year. Ideally, this should in turn fit into a line of products with a \$1-million to \$2-million sales potential.

Then this line should grow into a division making products with a potential of \$5-million to \$15-million. And looking far ahead, this division ought to fit together with other product divisions to make sub-systems or systems where the potential might be \$50-million to \$300-million.

This would take Esco from "components" into "packages" and on into full "systems." The line has become somewhat blurred, but at companies of Esco's general size and arrangement, an electronic device that performs a single function is a component—like the timer that Esco started out with. A device that performs a multiple function, such as the launcher timing system, is considered a control package or sub-system. Devices that perform several multiples of multiple functions are systems; Esco's current Panda project for proximity fusing of atomic missiles is one.

- **Progress**—So far, Esco's plan has worked out this way. The original voltage sensitometer fitted into a product line of voltage and frequency sensors, which grew into the Avionics Div. This makes sensors, relays, flashers, time delays, inverters, relays, power supplies, and control sub-systems—and



Unusual dock and unloaders handle both ships and barges at new Baton Rouge port facility

This new marine terminal at Burnside, Louisiana, is the largest bulk cargo facility in the Gulf Coast area. It is the latest step by the Greater Baton Rouge Port Commission to make that city a major port.

Because the facility was planned for ocean-going ore ships as well as river barges, initial studies indicated costly unloading equipment and dock construction. Designs later were approved, however, for two unloaders which combine operating features of ship unloaders with the lighter weight and lower cost of barge unloaders. These special machines (1) reduced cost of unloading equipment; (2) permitted use of

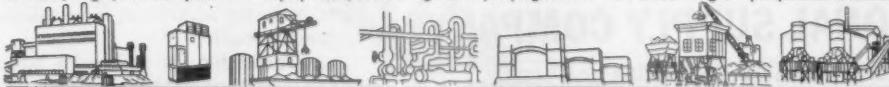
economical, 860-foot long, cellular, sheet pile dock.

Result: The facility can handle the largest ore ships now in use; can load and unload barges or ships; can transfer 2400 tons per hour to storage. The public terminal, operated by Ramsay, Scarlett & Co., Inc., is expected to handle more than 150 ships and 1800 barges during 1959.

The Burnside dock and unloaders are typical of Dravo experience in port and harbor development. Inquiries are invited on these or any of the engineered products and services listed below. Write DRAVO CORPORATION, PITTSBURGH 25, PENNSYLVANIA.



towboats, barges, river transportation - slopes, shafts, tunnels - gas & oil pumping stations - ore & coal bridges - pumphouses & intakes



boiler & power plants - heaters - docks & unloaders - fabricated piping - bridge sub-structures - river sand & gravel - sintering plants

DRAVO
CORPORATION

mill lubrication systems - foundations - grating
marine repairs - gantry and floating cranes
mechanical construction - process equipment
locks & dams - vibrating screens & conveyors
ready-mixed concrete - dredging - pile driving



Now is the time to solve next year's dry-greens problem!

There are no anxious weather-watchers on the Greens Committee of this club... for when the course needs moisture, it gets it! Gets it without delays, without uncertainties, and (in this particular case) with only one-third of the man power previously required to do a less efficient watering job. Gets it through the help of an underground network of over five miles of Spang welded steel pipe... one of our best-known products.

If you are concerned in any way with keeping grass wet when the weather is dry—whether it is on golf greens, municipal or institutional grounds, an estate or even a modest home lawn—you will find Spang Steel

Pipe a tried and proven material for what may be a rather punishing application. The strength of Spang Steel Pipe withstands ground heaving, which is a common hazard, and the possible passage of heavy equipment over the buried piping. Spang Steel Pipe has excellent weldability, so that the joints are tight, and the system stays trouble-free.

Now is the time to investigate, plan and program an installation... so it can be started early next spring, and be ready to ban drought-dread from your life from now on. Over 500 jobbers and wholesalers, in all sections of the United States, distribute Spang Steel Pipe.



THE NATIONAL SUPPLY COMPANY

Subsidiary of Armco Steel Corporation
TWO GATEWAY CENTER, PITTSBURGH 22, PA.



. . . instead of selling \$400 worth of equipment on each missile, you have to sell \$4,000 worth . . .

(STORY on page 83)

this year, it's totting up something close to \$5-million in sales.

"The idea is to build knowhow upon knowhow, so that you become a specialist," Burgess explains. "You have to learn to do some things better than others so you can become a leader."

While Esco has developed many standard products, hardly anything is sold from a catalogue. Products are off-the-shelf in the sense that perhaps 90% of the engineering has been done. But then they are adapted to the customer's particular requirements. A customer says, "We want something like you have on page nine, only a bit different"—and it turns out there are about 18 differences.

Since 1955, Esco has gone on from components to design and develop about 50 proprietary packages of airborne equipment—standard things such as emergency flashers and protective sensors, and specialty devices such as missile timers, armament controls, remote control switches, rocket and camera controls.

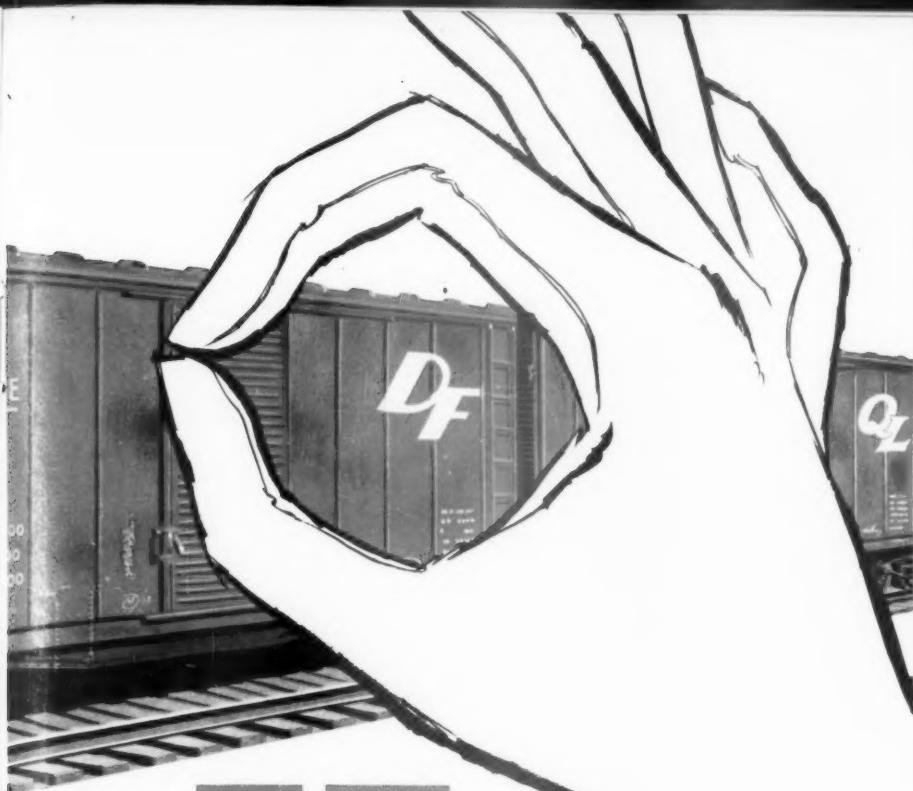
• **Fewer and Bigger**—All this might make a very fine growing business for Esco, except for one thing. Starting in 1957 the Armed Forces began cutting down drastically the number of weapons systems, and buying fewer copies of each. This forced Esco and other electronics outfits to go after more dollars worth of equipment on each vehicle.

Instead of selling \$400 worth of equipment on each of a large volume of missiles, you have to sell \$4,000 worth on smaller numbers. Esco, for example, sold a \$400 timer for the fusing system of the first model of the air-to-air missile Genie, made by Douglas Aircraft. On the next model missile, Esco hopes to sell the entire fusing system, at \$4,000.

III. Foundation for Growth

This change threw Esco and other electronics companies right into the middle of a far tougher competitive melee. Electronic Specialty, like others in the industry, felt that the keys to survival and growth in this much more competitive situation were to be found in these directions:

- Increasing its technical competence by hiring additional, more talented technical people.
- Increasing its ability to handle bigger and more sophisticated electronic packages by acquiring other



53 RAILROADS

now offer

EVANS

damage-prevention equipment

to shippers

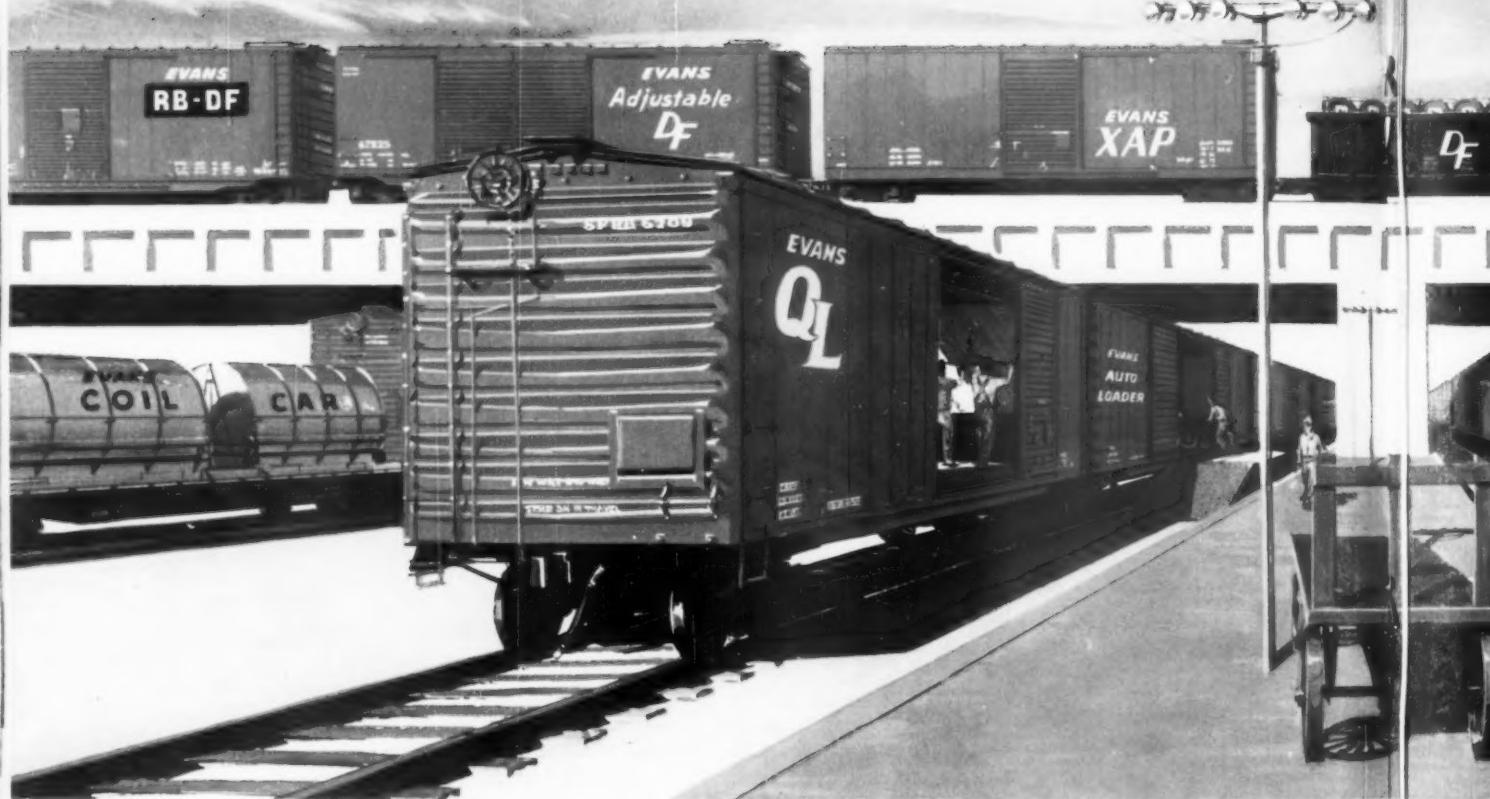
AT NO EXTRA COST!



BEST-KNOWN TRADEMARK IN DAMAGE-FREE SHIPPING

Atchison, Topeka & Santa Fe Railroad
Atlantic Coast Line
Baltimore & Ohio
Bessemer & Lake Erie
Chicago, Rock Island & Pacific
Chicago, Burlington & Quincy
Chicago & Eastern Illinois
Chicago, Milwaukee, St. Paul & Pacific
Chicago & Northwestern
Canadian National
Chicago Great Western
Chesapeake & Ohio
Clinchfield Railroad Company
Central Railroad of New Jersey
Delaware and Hudson
Delaware, Lackawanna & Western
Denver & Rio Grande Western
Detroit, Toledo & Ironton
Detroit & Toledo Shore Line
Erie Railroad Company
Grand Trunk Western
Great Northern
Green Bay & Western
Gulf, Mobile & Ohio Railroad
Illinois Central
Illinois Terminal R.R.
Kansas City Southern

Kansas, Oklahoma & Gulf
Lehigh Valley
Louisville & Nashville
Missouri, Kansas, Texas
Missouri Pacific
Monon Railroad
Minneapolis & St. Louis
New York Central
New York, Chicago, & St. Louis
New York, New Haven & Hartford
Norfolk & Western
Northern Pacific
Pennsylvania Railroad
Pittsburgh & West Virginia
Reading Railroad Company
Seaboard Airline R.R.
St. Louis—San Francisco
St. Louis—Southwestern
Soo Line
Southern Railway System
Southern Pacific
Texas & Pacific
Union Pacific
Wabash Railroad
Western Maryland
Western Pacific



LEADERS IN INDUSTRY AND RAILROADS FOR NEW AND BETTER WAYS TO SHIP

More than 8,000 major shippers and receivers of freight in North America have reduced costs, eliminated damage and improved transportation conditions by use of Evans-designed equipment.

Since 1915 Evans has supplied railroads with damage-prevention equipment and has helped industry to reduce shipping costs. The tremendous popularity of Evans equipment with both railroads and shippers is proved by the fact that there are now more than 100,000 Evans-equipped cars in use on 53 railroads and by the Armed Services.

Railroads provide Evans-equipped cars to shippers at no extra charge. Because Evans-equipped cars reduce damage claims and permit heavier loads, they are constantly in demand, constantly in use—which means greater profits for the railroads and greater shipper satisfaction. Evans maintains a nationwide network of offices staffed with loading engineers who are ready to help shippers and railroads solve damage problems. For complete information, write Evans Products Company, Dept. 10, Plymouth, Michigan.

EVANS DAMAGE-PREVENTION EQUIPMENT INCLUDES:

- **DF** . . . A permanently installed device that locks lading in boxcars for dunnage-free, damage-free transit.
- **RB-DF** . . . An *insulated* DF-equipped car designed for the safe transit of products that cannot stand extreme temperature changes.
- **Adjustable DF** . . . A DF-equipped car with *Movable Belt Rails* for greater flexibility in vertical adjustments.
- **DF Gondola** (open or closed) . . . Developed to meet the special needs of certain industrial shippers.
- **QL** . . . Movable bulkheads permit sectionalizing of load. Swing to roof when not in use, allowing free access in loading and unloading.
- **RB-QL** . . . An *insulated* QL-equipped car.
- **Hydra-Cushion Underframe** . . . A unique hydraulic shock-absorbing system for freight cars . . . an Evans-Waugh product.
- **Auto-Loader** . . . Permits the shipment of four automobiles or trucks in one boxcar—safe from transit and weather damage.
- **XAP Car Devices** . . . Specially fitted for damage-free shipments of automotive parts.
- **Coil Car** . . . A car specially designed to protect coils of steel from load shifting and weather damage.

EVANS PRODUCTS COMPANY



PLYMOUTH, MICHIGAN



RAILROADS LOOK TO EVANS TO PROTECT LADING IN TRANSIT



DF LOADER—the "Kid Glove Treatment" that locks in lading.



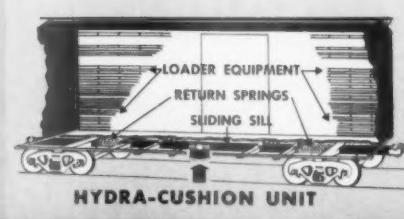
DF GONDOLA—designed for safe transit of extra-heavy industrial lading.



QL® CAR MOVABLE BULK-HEADS—are easily unlocked, lowered and secured tightly against load face.



AUTO-LOADER—allows fast, safe loading of four automobiles per boxcar.



HYDRA-CUSHION UNIT

EVANS
RR LOADING EQUIPMENT

**Follow
the
leaders
in
industry
who use
and
recommend
EVANS
damage—
prevention
equipment**

"We tried many things, logged results, made comparisons. In 1957 we called in Evans Products Company loading engineers. Then, with DF-equipped cars, we began concentrating experimental runs—without dunnage—in problem areas of the Northeast. Damage was drastically reduced—finally."

General Electric Company, Appliance Park, Kentucky

"The obvious benefits to shippers, receivers, and rail carriers are self-evident, and you, as developers and pioneers of this equipment, can take justifiable pride in a job well done."

Weirton Steel Company, Weirton, West Virginia

"We have been using 'DF' equipment exclusively since November 1951, and can honestly report that the 'DF' cars have enabled our continuing to route our shipments via railroads."

Rust-Oleum Corporation, Evanston, Illinois

"Car mentioned above arrived in Dallas on September 10th, and preliminary inspection made. There was no visible damage, and load was in excellent condition. The shipper and consignee are both very happy, and understandably so after an average claim of \$500 per car before DF."

**Traffic Department—Southern Pacific Lines
Indianapolis, Indiana Office**

"... car arrived in San Francisco. DF-equipped car is certainly the most beautiful freight car we have ever seen and there was no damage whatsoever to either the Tenite or the other materials in the car . . . if you could make all shipments in this type of car, it would completely eliminate any damage claims . . ."

**Tennessee Eastman Company (Division of Eastman Kodak)
Kingsport, Tennessee**

"We realized savings of \$300 to \$350 in per-car freight charges through DF's enabling us to ship the higher 70,000-pound minimum to one destination where several cars per month are involved from two plants."

Hercules Powder Company, Wellington, Delaware

"Our experience has also shown that for both short or very long hauls and on shipments of practically all type refractory materials, whether loose or on pallets, in drums, sacks or cartons, the Evans DF-equipped Car has proved itself to be a truly modern box car built to meet present day conditions."

Harbison Walker Refractories Co., Pittsburgh, Pennsylvania

"We had a train accident on August 9th in which 54824 was involved. This car was loaded with 2700 cartons of pickles in glass jars. The entire lading remained intact with very slight damage. Thought you may be interested in these photographs to prove the value of the 'DF' bracing."

**The Central Railroad Company of New Jersey
Elizabeth, New Jersey**

EVANS PRODUCTS COMPANY



PLYMOUTH, MICHIGAN

... Burgess' principle is to hire somebody bigger than the job . . .

(STORY on page 83)

companies with some special knowhow.

• Stepping up its sales effort by more savvy and more constant liaison with the market, and by "multi-level" selling.

• **Talent and Money**—Engineering talent was the first target. Early in 1957, Esco spirited William H. Doty away from Bulova Watch Co.'s Electronics Div. to become director of engineering. William R. Martin, from Lockheed Aircraft, became chief radiating systems engineer.

In May, 1957, Burgess bagged Cisel from Radio Corp. of America, where he was manager of weapons systems. He became Esco's executive vice-president (moving up to senior vice-president last month, when R. M. Russell was brought in to be executive vice-president).

In staffing up, Burgess has always followed one principle—hire somebody who is bigger than the job you are asking him to fill. This takes a subtle sense of timing, and a bit of diplomacy to convince the man he'll find more adventure and a better chance to grow with you than in the security of a bigger company. And, in a sense, you want to hire him before you need him.

To survive in the toughening race, Esco needed money as well as talent. Last year, Burgess arranged the financing to make possible new acquisitions. Goldman, Sachs & Co. placed a \$500,000 convertible debenture with Prudential Life Insurance Co., and a stock sale netted the company \$165,000. (Burgess also sold more of his own stock at this time, but still holds about 30%).

• **New Acquisitions**—This year Esco was ready to branch out by acquisition. In March it bought for cash Electrical Engineering & Mfg. Corp., a 17-year-old, well-established Los Angeles manufacturer of high-performance motors and actuators. In August it acquired, mainly for stock, Technicraft Laboratories of Thomaston, Conn., a pioneer in the design, development, and production of rigid and flexible wave guides.

Most important of the three acquisitions, though, was Systems Laboratories Corp., a California research and development group headed by Dr. James A. March and Richard H. DeLano—also acquired mainly for stock. Systems has a nationwide reputation in the "far out" field of analysis and design of space age weapons, has been working as consultant on such projects as anti-ICBM weapons systems and orbiting satellites.

• **Big Role**—Systems Laboratories will



"Thy shelf," of course, is that battlefield where your package competes constantly for the shopper's dollar. Your package hits hardest...when Calcofluor White is at work.

This chemical brightener whitens white patent-coated board...printing is cleaner, colors are sharper, packages are crisper, more compelling. Customers reach instinctively for the package that reaches out for them! Don't lose a sale at that last vital step...at the shelf...because your package lacked the snap. Ask your regular package sources, or ask us about Calcofluor White.

CALCOFLUOR® WWHITE
FOR WHITER WHITES

CYANAMID

AMERICAN CYANAMID COMPANY • DYES DEPARTMENT • BOUND BROOK, N. J.

Rockwell Report



by W. F. ROCKWELL, JR.
President
Rockwell Manufacturing Company

THIS MONTH, about twenty-five million Americans have used one of our products: voting machines. In so doing, they have demonstrated several things very important to free people.

First, they have voted in absolute secrecy, with no possible way for anyone ever to tell how they voted, and with no possible chance of their vote being thrown out because of a technical error. (If you make a mistake on a paper ballot, such as voting for six councilmen instead of five, your vote is thrown out and you never know it. This is impossible on our voting machines. You can even "erase" and change your vote, before leaving the booth, without jeopardizing it.) And they will have voted in far less time than is required in voting "by hand," and at less cost. Where voting machines are used, the cost of an election is reduced by from $\frac{1}{2}$ to $\frac{1}{3}$ due to savings in number of polling places needed, number of paid officials in each place, in printing millions of official ballots, and in the long task of vote counting.

Also—and this is very important—the American Institute of Public Opinion (Gallup Poll) has documented the fact that a higher percentage of eligible voters vote where machines are used than by the hand method.

While many Americans have never used a voting machine, others have been using them for many years. Our subsidiary, Automatic Voting Machine Company, has been designing and building voting machines for more than sixty years. This has become a more and more exacting job as our lives, our government, and our election laws have become more and more complicated. The perfect coordination of more than 23,000 working parts enables our voting machines to accommodate the widely diverse regulations of every state, county, and city in the nation.

As a measuring device, the voting machine makes more demands on accuracy, perhaps, than any meter or other registering device we make. At stake, in its use, is more than product or money—the vote of free men and women.

Since it took us more than thirty centuries to win the right to vote freely, and in secret, this is probably our most precious possession. Our people who make and service voting machines never forget that.

* * *

The first use of our voting machines in a union election was in 1922. During the thirties, because of the privacy and accuracy of machine voting, the National Labor Relations Board urged their use in holding referenda to decide the bargaining agencies for employees. Today, they are used regularly by more than 250 union organizations.

* * *

New use for voting machines: This Fall we used our voting machines in conducting our periodic employee attitude survey. Result—more employee confidence in the secrecy of the vote and accuracy of the count, and lower cost in tabulating the results. As far as we know, this is the first such use for voting machines, but it may well open a whole new field for them in industry.

* * *

The Hi-Flo Regulator, the first complete "packaged" regulator with all the necessary instrumentation for controlling close tolerances large volumes of natural gas at high pressures, is being marketed to the gas industry by our Meter and Valve Division. In addition to Nordstrom Valves, and controls made by our subsidiary, Republic Flow Meters Company, the Hi-Flo Regulator contains components produced by four other divisions.

One of a series of informal reports on the operations and growth of the

ROCKWELL MANUFACTURING COMPANY
PITTSBURGH 8, PA.

for its customers, suppliers, employees, stockholders and other friends

have a big role in Cisel's drive to build up Esco's ability to go after bigger and bigger chunks of electronics business. He expects Systems to:

- Help analyze current problems through mathematical analyses, and operational analyses on products approaching the hardware stage.

- Discover coming needs for hardware by analyzing future weapons systems still in the study stage—so Esco can get a head start on the others on research and development.

- Guide Esco in deciding what major lines to pursue by answering such questions as: Which missiles have the best chance? What satellite projects are likely to prosper? What are the implications of space probes?

IV. Scrambling for Business

Constantly increasing technical competence, and constantly broadening your production base are fundamental, of course. But in the fierce scramble for defense business, an electronics manufacturer needs something more: a highly sophisticated and savvy sales approach.

"First of all, you have to maintain a constant relation with the market," says Harmon. "The growth of an electronics company today is based on constant liaison with people who keep you abreast of products and future business. The business that grows will maintain relations with the channels through which business is developed, both on a business and social basis."

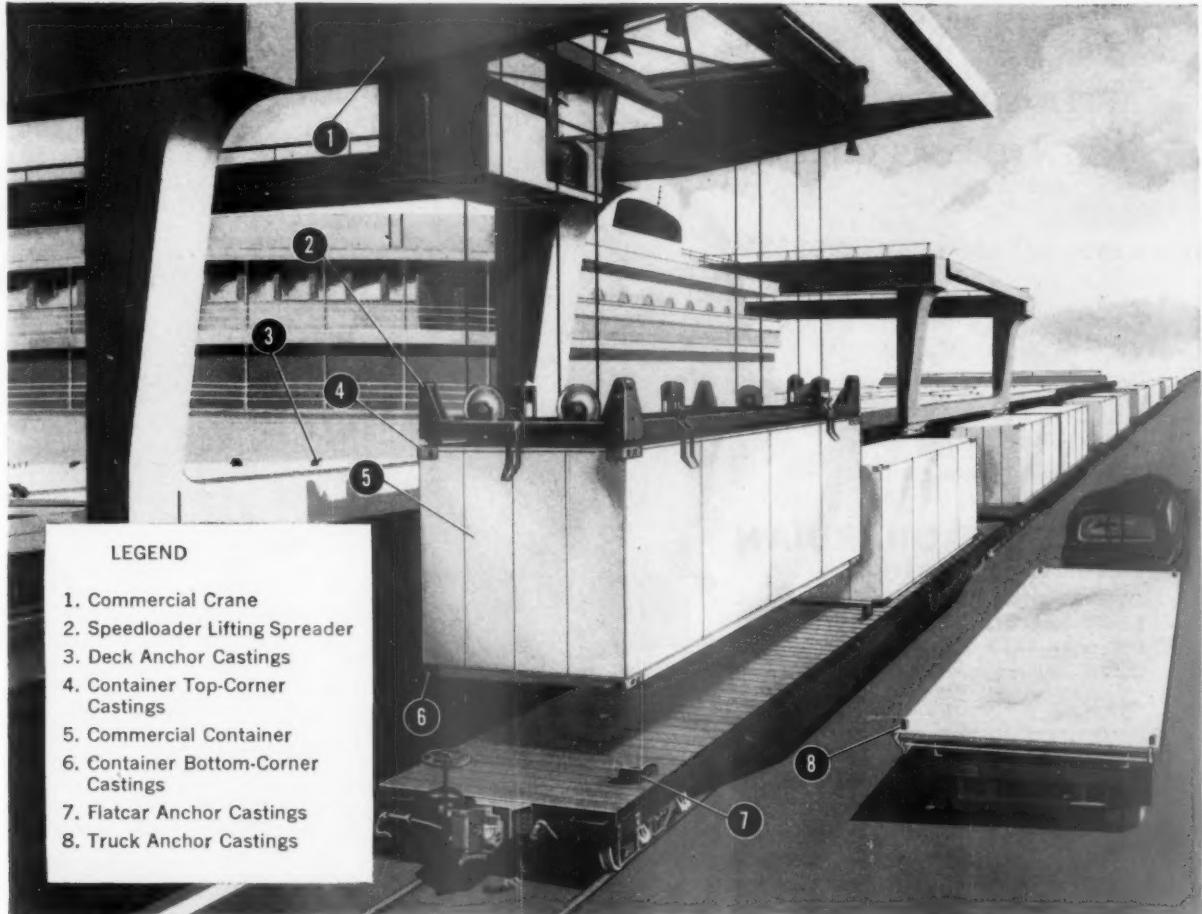
- Getting a Tip—Harmon cites a conversation in Dayton, Ohio, with an Air Force colonel he had known in Germany. The colonel happened to ask if his company was getting in on the proximity fuse business. Harmon hadn't heard about that before, but he learned that the Air Force procurement people were anxious to find a good proximity fuse that would work in all-weather conditions and resist electronic countermeasures.

Harmon rushed to Los Angeles to tell Cisel. Cisel, who holds 15 patents, made some preliminary sketches, decided Esco could do it. Off they went to a customer, a prime contractor on an air-to-air missile, to show him how they could "retrofit" a missile with the new fuse—that is, better the performance of an existing missile by fitting it with the new fuse. If the Air Force decides to do this, the manufacturer will get more business, and so will Electronic Specialty—as much as \$35-million on a single missile, according to Burgess.

More recently, an Air Force friend of Harmon's passed on word that the Air Force might have to economize on the B-70 bomber by using existing electronic systems instead of developing special new ones. Esco's top trio hot-footed it to all major suppliers of elec-



NOW—standardized, fully automatic cargo container handling



NEW—NATIONAL SPEEDLOADER SYSTEM can be built into any container and any crane by any manufacturer

NATIONAL'S SPEEDLOADER SYSTEM is the first fully automatic cargo container handling system to offer standardization to all carriers and shippers. It is adaptable to all forms of transportation — ship, railroad, truck, barge and airfreight.

ADAPTABLE TO ANY CONTAINER, crane or vehicle, National supplies only the essential Speed-loader components to commercial producers of these items. That means users can purchase their cranes from any crane manufacturer, their containers from any container manufacturer.

VERSATILITY OF THE SPEEDLOADER concept of containerized cargo handling provides for automatic operation (electric, hydraulic, pneumatic) on shipboard or shore, as well as semi-automatic methods (fork-lift truck, roller conveyor, hook-hoisting), or even manual operation (electric hoist, A-frame) in smaller plants.

LOWER CARGO HANDLING COSTS, through increased capability for cargo handling, is only one of the advantages. Other important advances: sharply reduced terminal time, lower crating and packaging costs, reduced damage to merchandise, elimination of theft and pilferage.

A-190A



NATIONAL MALLEABLE AND STEEL **CASTINGS COMPANY**
CLEVELAND 6, OHIO

A request, on your business or professional letterhead, will bring your copy of Bulletin 13959 "National Speed-loader Container Handling System" by return mail.

Transportation Products Division

RESTING ON LAURELS

AFTER SOLVING INVENTORY PROBLEMS



If you, too, have inventory and need cash, solve your problem by using Douglas-Guardian Field Warehousing for an inventory loan with your local bank or lending agency.

DOUGLAS-GUARDIAN WAREHOUSE CORPORATION

EXECUTIVE OFFICE: 118 North Front Street
New Orleans 1, Louisiana
MAgnolia 5353
36 Offices throughout the Country



(Advertisement)



The winner can save you money

- Case No. 608:** A New Jersey plant* making a highly abrasive product became interested in reducing the cost of work gloves and the incidence of nuisance hand injuries. They job-tested every well known make and type of glove, under controlled conditions. An Edmont glove, costing \$10.75 a dozen, outwore all others and gave the lowest gloving cost — \$.028 per 1000 product units handled. The next longest wearing glove cost \$27.00 a dozen, equivalent to \$.08 per 1000 units handled.

Free Offer to Employers: We make more than 50 types of coated and treated fabric gloves to fit job needs. Tell us your operation. Without cost we will recommend correct gloves and send you samples for testing.

Edmont Manufacturing Company,
1220 Walnut Street, Coshocton, Ohio.

*Name on request

Edmont
JOB-FITTED GLOVES



... the danger is you never know whether you are proposing to a customer or a competitor . . .

(STORY on page 83)

tronics systems for the B-70 to make a pitch for Esco products.

- Systematic**—This market liaison is a systematic affair. On a day-to-day basis it involves what Harmon and Cisel call "multi-level selling." That means contact at all levels—from the various procurement offices of the armed services and the National Aeronautics & Space Administration, down through the weapons system manager in the company having the prime contract, to the purchasing agent, and the engineer on the job who is supervising the project where your equipment is going.

Each of these levels is thoroughly covered. In purchasing, for example, you start with the buyer, proceed to the purchasing agent, the buying supervisor, the minor subcontracts supervisor, and finally the major contracts supervisor.

- "Clueing In"**—Harmon's specialty is developing friends in high places—in companies and in the services. They help clue him in on work to be had. Cisel works closely with weapons systems managers at the aircraft companies; as former head of RCA's weapons systems, he speaks their language. Esco's salesmen talk to purchasing agents, Esco's engineers have company engineering contacts.

"You continually probe and question across these levels, and you get 80% of your current guidance this way," says Cisel. "You sell this way and you learn this way."

When Esco is involved with another company in a project, Harmon or another key executive meets weekly with someone from the other company "until the project is in the bag." Then Cisel takes over until the prime contractor is assured that Esco engineering and quality control people are thoroughly informed. Cisel acts as project manager until the project is on the road; then the product division manager takes over.

V. Cloaks and Daggers

When Esco has decided what projects are worth bidding on, it makes a proposal. It's here that the business sometimes gets a cloak-and-dagger look.

There's a danger in bidding, Cisel explains: "You expose yourself continuously. You never know whether you are proposing to a customer or a competitor."

A year ago, for example, Esco put

Industry's No.

Motor Carrier!

*Specified by
discriminating shippers.*

*Serving 8,039 points
in 24 states*



**INTERSTATE
MOTOR FREIGHT
SYSTEM**

INTERSTATE MOTOR FREIGHT SYSTEM

Grand Rapids, Michigan

MORE THAN A TRUCK LINE... A TRANSPORTATION SYSTEM

**WHATEVER
MATERIAL
ADVANTAGES
YOU NEED...**



*from insulation
to isolation...*

**YOU'LL FIND THEM
IN A FEELS!**

Versatile A+ felts serve an almost infinite variety of purposes . . . muffling the roar of a jet . . . cushioning the vibration of a punch press. They can be made soft and resilient — or tough and unyielding. They offer practical answers to thousands of design problems. Whatever your design need, in absorption, sealing, insulating, filtering, cushioning, polishing, or special fashion effects, A+ felts can help you meet it.

Send us your problem; our engineers will follow through promptly.

**American Felt
Company**



111 Glenville Road, Glenville, Conn.

Among our famous trademarks:
VISTEX—fiber-reinforced gaskets and seals; **WINDSOR FELT**—nonwoven bonded fabrics; **HUSHALON**—decorative and acoustical wall covering.

forth a major effort in making a proposal to Sperry Gyroscope Co. Esco executives made several visits on multiple levels, continuously checking out the situation. Several other companies went the same route with Esco, says Cisel. In all cases, Sperry engineers were courteous. "But they didn't hand out a dollar of business. Sperry kept it."

Sometimes customers develop into competitors. Harmon says Convair Div. of General Dynamics Corp. used to buy \$100,000 a year in electronic components from Esco, sometimes even \$500,000 when Esco was selling components for missile ground support equipment. But as fewer airplanes were ordered and Convair's engineering load fell off, Convair decided to make the items itself.

• **Well-Hedged**—Sometimes, though, Esco is able to hedge its bets pretty well, and sometimes it wins a prize in competition with the big fellows. Last summer, for example, it was awarded a contract for the complete mission and traffic control antenna system for the triple-sonic F-108 interceptor, winning over such competitors as Convair, Lockheed, Sylvania, Melpar, Inc., and North American's Columbus Div. This particular prize didn't last very long, since the F-108 was later canceled.

Esco also won the right to develop the current Panda project for proximity fusing of atomic missiles over some of the larger electronics companies, including Bendix and Emerson Radio & Phonograph Corp.

Today, Esco is proposing to Westinghouse Electric Corp. for the Radiating Antenna System—part of a bomber defense system on which Westinghouse holds a prime contract. The chief competitor is Temco Aircraft Corp. Temco joined Westinghouse in a team proposal for the bomber defense system contract that Westinghouse won. But under Air Force regulations, Westinghouse cannot simply hand over the business to its partner, Temco; it has to put the work up for bid.

Even if Esco loses its bid for the Radiating Antenna System, all is not lost. Esco has a superior competence in making some of the system components, and could expect to sell its wave guides and similar components to Temco.

All this shows how involved the scramble for defense business is getting to be. Westinghouse has a larger antenna-making capability than either Temco or Esco. But the Air Force requires it to put out 50% of the contract, and Westinghouse would rather make the computers and put out other items.

• **Never Tell All**—The cloak-and-dagger aspect in making proposals is the result of not knowing whether the company you are proposing to will end up

**now dictate
ANYWHERE
with new
self-powered
portable**



FULLY
TRANSISTORIZED

**DeJUR
GRUNIG**

STENO RETTE® COMPANION

Now just reel off your dictation anywhere in the world and send it back for transcription on the full-size Stenorette "T" in the office. This lightweight portable carries its own power. Lets you dictate in a plane, train or even walking, gives you every automatic push-button dictating feature of a big unit. **only \$199.50**
Complete with dictating accessories, **plus F.E.T.**

MAIL COUPON FOR FULL DETAILS

DeJUR-AMSCO CORP. 45-01 Northern Blvd.
Business Equipment Division, L. I. C. 1, N. Y.

Please send me your brochure giving complete details on the Stenorette Companion Self-Powered Portable Dictating Machine.

Name _____

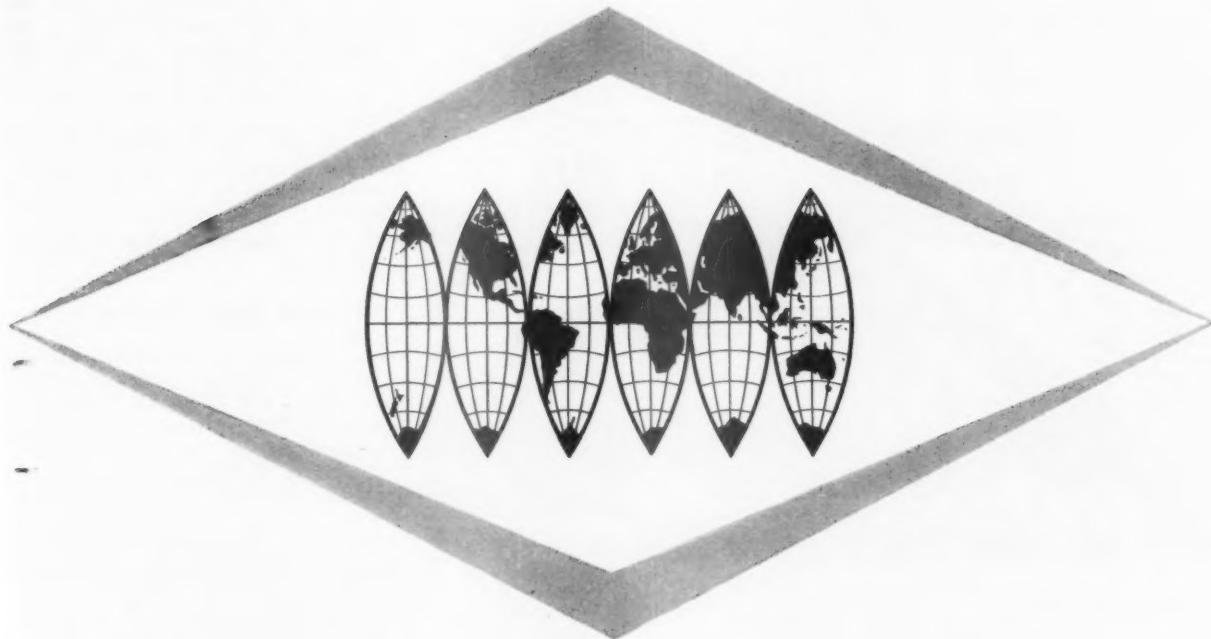
Company _____

Address _____

City _____ Zone _____ State _____

© DeJUR-AMSCO CORPORATION 1959 875

Been abroad lately?



If you have been abroad lately, like most management-minded Americans, you undoubtedly spent a good deal of time comparing overseas operations with your own. And you were probably impressed by the tremendous strides our foreign neighbors are making to improve living standards through industrial progress and greater food productivity.

Along the world's industrial front Amchem finishing chemicals are helping free nations everywhere to produce more and better products ranging from bolts to bridges, from aircraft to appliances. These Amchem chemicals provide a firm paint bond, inhibit corrosion, or facilitate working or drawing steel, aluminum, zinc—virtually every known production type of metal.

Throughout the free world millions of cropland acres—many of them once incapable of cultivation—are yielding bountiful harvests thanks to a big assist from chemical weed killers and synthetic plant hormones. In the development of these agricultural chemicals, Amchem Products, Inc., has long been an international leader and pioneer.

The Amchem record for results abroad is as versatile as

it is long. In industry Amchem chemicals provide basic metal protection for thousands of products pouring out of factories in dozens of countries. In agriculture Amchem chemicals have cleared pastures of brush in Australia and New Zealand, replaced hands-and-knees weeding in Japan, controlled brush in Sweden's state forests, cleared aquatic weeds from the Panama Canal, and helped the Belgian government eradicate the ubiquitous water hyacinth when it threatened navigation on the Congo River.

Through its Benjamin Foster Company Division, Amchem provides the free world's industries with a complete line of over 99 fire-resistant, weather-protected coatings, adhesives, sealers and flashings designed exclusively for use with insulation materials.

Today, through its 124 licensees in 54 countries, Amchem continues to make important contributions in scientific weed and brush control as well as in conversion and inhibition techniques designed to protect metals.

Wherever in the free world you may roam, there is an Amchem chemical at work protecting, beautifying or improving a product, a plant or a home.



AMCHEM PRODUCTS, INC.

(formerly American Chemical Paint Co.)

AMBLER 35, PA.

Detroit, Mich., St. Joseph, Mo., Niles, Calif., Windsor, Ont.

Amchem is a registered trademark of Amchem Products, Inc.



PROBLEM: Face-lift a bridge!



SOLUTION:

Yellow Strand Wire Rope made from Keystone Wire helped do the job



A big order... face-lifting a bridge! This unusual engineering feat took place when the old bridge across the Columbia River at Portland was raised 20 to 30 feet to match the elevation of an adjacent new structure. Yellow Strand Wire Rope made of Keystone Wire helped on this important assignment.

Keystone Wire has helped Broderick & Bascom Rope Co., of St. Louis, Missouri, build a reputation for quality Yellow Strand Wire Rope. From tiny 1/32" aircraft strand to big 3 1/8" "Powersteel" with a tensile strength of 448 tons, Keystone engineers have worked with Broderick and Bascom to match wire needs with the demands of users in construction, mining, logging, oil fields and many other markets. Keystone has supplied B & B quality wire for more than 30 years.

Whatever your wire needs may be, consult an experienced Keystone wire representative. His knowledge of correct wire application, combined with Keystone metallurgical and testing facilities, will help you build a better product... and cut costs, too!

Keystone Steel & Wire Company, Peoria 7, Illinois

Cold heading and
forming wire for
industrial uses.



KEYSTONE

buying from you or making the item.

"You can't tell everything," says Cisel. "You put forth your best efforts so you can win a contract, but at the same time you withhold some essential part of the knowhow so the prospective customer can't steal it from you if he decides to make it himself."

He likes to illustrate his ideas with a tale about a foreign shipping company that is supposed to have asked U.S. shipbuilders to submit drawings for a proposed cargo ship. The foreign company took the designs and turned them over to a foreign shipyard. When the ship was launched, it turned bottom up in the river. "We don't go that far, of course," says Cisel; "it would be dangerous. But it illustrates the point."

VI. New Sales Tactics

To sharpen its sales efforts, Esco has begun to develop a national sales organization, and Thomas R. Cataldo, 38, formerly sales manager for Servomechanisms, Inc., has been brought in as director of marketing.

"Manufacturers representatives serve you pretty well until you reach the \$10-million level," says Harmon. "Then you have to start thinking of setting up a national sales organization."

The new setup will aim at boosting profits. Salesmen will get bonuses based on how much selling costs are cut below 4%, with 3% as the goal. (Manufacturers representatives in the defense business get a fee of 5% of net hardware billings.) Harmon hopes to increase volume enough through the new sales organization to net \$250,000 after taxes in its second year. But Esco will still rely in part on manufacturers representatives for some time.

As of now, Esco has its own sales offices in Los Angeles, Seattle, and the Redstone Arsenal at Huntsville, Ala. It hopes to start an East Coast office after the first of the year.

• Industrial—Esco is also ready to reconsider the industrial electronics market, from which it pulled back three years ago. Some of the military products it has worked on have an industrial potential. Something like the programming device or timer, for example, which sets the sequence and timing of operations in firing a missile from a F-102 Convair fighter, could be applied to programming a factory sequence.

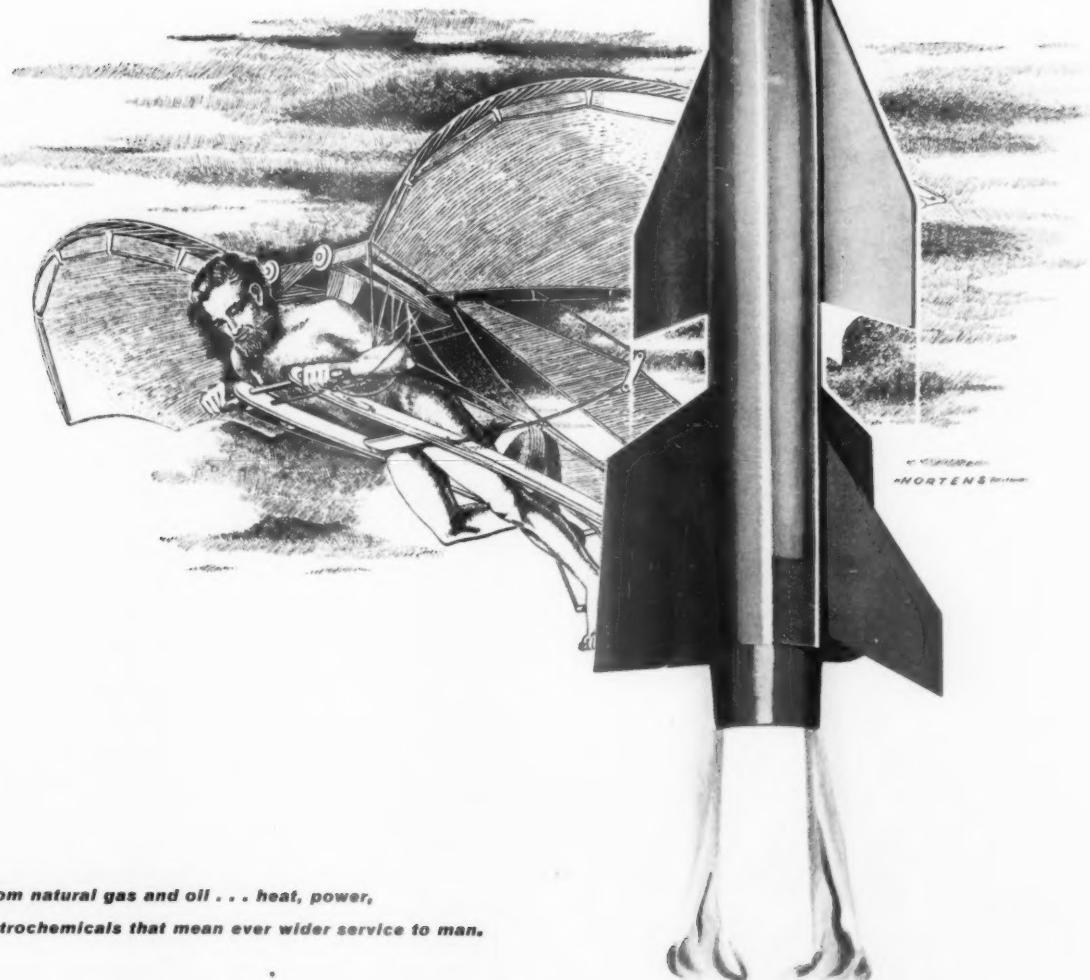
The logical way to get back into the industrial field, Burgess thinks, would be to merge with a maker of electro-mechanical controls which is covering the market but has not yet applied electronic techniques. Esco could superimpose electronic knowhow on such a company's devices—and use its distribution system, thus saving the pain of setting up a sales force. **END**

fortune favors the bold

In 1903 man's age old dream of flight became reality.
The Wrights flew.

Thousands had tried before them. None succeeded.
But none failed entirely, either. For each attempt
added to the knowledge needed for ultimate victory.

Success may not be won in a leap.
But fortune favors the bold.



**From natural gas and oil . . . heat, power,
petrochemicals that mean ever wider service to man.**

TENNESSEE GAS TRANSMISSION COMPANY
LEADING PROVIDER OF ENERGY—NATURAL GAS, OIL AND THEIR PRODUCTS

HOUSTON, TEXAS



DIVISIONS: Tennessee Gas Pipeline Company • Tennessee Gas and Oil Company • Bay Petroleum Company
SUBSIDIARIES: Midwestern Gas Transmission Company • Tennessee Life Insurance Company • AFFILIATE: Petro-Tex Chemical Corp.



It's 3M MAGIC!

TAPEnology...industry's

TAPE keeps hospital steel surgery bright!

Tough "SCOTCH" Brand Protective Tape No. 343 is now giving the Shampaine Company of St. Louis protection all along the line . . . keeping stainless steel components of equipment for physicians and hospitals scratch- and blemish-free during fabrication and assembly. Application is by shop-built semi-automatic applicator from schematics by 3M Customer Engineering Service. Shampaine reports ". . . time and labor savings produce an overall savings in cost."

TAPE "freezes" shelves for positive shipment protection!

Here's how a few pennies worth of tape gives quick, clean efficient protection to thousands of dollars worth of merchandise. Prior to crating these 12-foot commercial refrigeration cases, multiple strips of "SCOTCH" Brand Filament Tape are passed over shelves, parts, and all other movable components to fasten them securely in place. Tape sticks at a touch; strips off clean without leaving residue. Won't scratch or mar finishes; won't cut workmen's hands!



MINNESOTA MINING AND MANUFACTURING COMPANY
... WHERE RESEARCH IS THE KEY TO TOMORROW



"SCOTCH" is a registered trademark for the pressure-sensitive adhesive tapes of 3M Co., St. Paul 6, Minn. Export: 99 Park Ave., New York 16. Canada: London, Ontario.

newest cost-cutting tool

TAPE guards space age "Sting"
against tearing 2300 mph winds!

The "Sting" is the shaft that holds test models in wind tunnels at the National Aeronautics and Space Administration's Ames Research Center, Moffett Field, California. Researchers wrap entire surface of "Sting" with yellow "SCOTCH" Brand Plastic Tape No. 471 to guard external instrument leads against wind velocities up to Mach 3.5—equivalent to flight velocities of 2300 m.p.h. That kind of punishment calls for a tape that can "take it." Yet tough "SCOTCH" Brand Plastic Tape No. 471 does more than just stick tight and conform to every contour. It resists acids, oil, alkalies, water and sunlight—even abrasion. Available in eight bright colors and a variety of widths.



TAPEnology is a new way of looking at the more than 300 pressure-sensitive tapes trademarked "SCOTCH" Brand. It includes the "magic" qualities that make these tapes highly versatile "tools" for you: tapes that stick to any surface; tapes strong as steel; clear as glass; colorful as Christmas. Tapes that disappear—others that stand up to acids, alkalies, solvents. And it covers more than 100 "3M-MATIC" Taping and Dispensing methods to keep pace with any production line. Want to become a "TAPEnologist" yourself? It's easy. Ask your nearest "SCOTCH" Brand Distributor, or write us: 3M Co., 900 Bush Ave., St. Paul 6, Minn., Dept. IAB-119.

When tape costs so little, why take less than "SCOTCH" Brand?

PRESTRESSED CONCRETE IN OUR 50th STATE

Owner, Developer and Contractor: Hawaiian Land Co., Ltd. Architects & Engineers: John Graham and Co. Prestressed Consultants: Ben C. Gerwick, Inc., San Francisco; Anderson, Birkeland & Anderson, Tacoma; Park & Yee, Honolulu. Prestressed Concrete Fabricator: Hawaiian Dredging and Construction Co.



...HONOLULU SHOPPING CENTER WILL BE ONE OF NATION'S BIGGEST

All told, this huge complex — named Ala Moana — will cover 50 acres, have parking space for 7,000 cars and will cost some \$39,500,000 on completion of phase 2, including the 25-floor office building, 1441 Kapiolani.

The use of prestressed concrete is widespread; in the beams, girders and joists for the parking deck and the 25-floor office building, in street curbing, bumper strips in the parking areas, in lamp posts and in prestressed concrete piles which serve both as foundations and columns supporting the parking deck and mall level shops.

Like all good members of the national "family," the Ala Moana developers turned to the mainland for the ultimate in stress-relieved prestressing strand for the critical members in their project; in this case manufactured by Roebling.

For over a decade, the activities of Roebling in the prestressed concrete field have embraced all phases of this remarkable and economically rewarding construction method. Architects, engineers and builders have found — in many States, both old and new — that the quality of Roebling strand, as well as the quality of Roebling engineering

assistance, can't be had — *for the same satisfaction* — from anywhere else in the world.

We are immediately desirous of sharing with you our information, experience and data on prestressed concrete in all of its fascinating areas. Please address inquiries to Roebling's Construction Materials Division, Trenton 2, New Jersey.

ROEBLING 
Branch Offices In Principal Cities
John A. Roebling's Sons Division
The Colorado Fuel and Iron Corporation

In Marketing

British Commercial TV Makes Bid For U.S. Ads, but Rush Is Unlikely

Hard on the word that Britain has eased quantitative restrictions on many U.S. products (BW—Nov. 7'59, p14), Associated-Rediffusion, major commercial TV company in Britain, announced a program to sell advertising time on British TV to U.S. concerns.

Last week, officials of Associated-Rediffusion said it had named McCann-Erickson to help put over its program. It is also negotiating for a station representative here to do the actual selling.

Associated-Rediffusion is the London week-day operator under Independent Television Authority (ITA), official British commercial TV agency (BW—Sep. 17'55, p86). A-R has roughly \$35-million in gross annual revenues, and a market of over 2-million sets that can receive its broadcasts—plus some 900,000 one-channel sets that could be converted.

Chances of a great rush for British TV time by would-be U.S. exporters look slight right now. Some 25% of all British commercial TV revenues now come from U.S.-controlled companies operating in the United Kingdom. But Kirby Block & Co., big U.S. buying office, reported last month a resurgence of interest in U.S. goods on the part of European department stores—blue jeans, for example. Guy Paine, advertisement sales manager of Associated-Rediffusion, mentioned textile concerns and cars as potential customers.

A-R's time is sold out for some seven months of the year, Paine said, but in the remaining five it has up to half its time open. Further, it is banking on an expansion of the hours it may broadcast—now limited to 35 a week, with an average of 6 min. per hour open to commercials.

FTC Task Force Set Up to Enforce And Exponent Robinson-Patman Act

Federal Trade Commission Chmn. Earl W. Kintner used a speech before the Grocery Manufacturers of America this week to announce creation of a "Robinson-Patman Act task force."

Kintner, who just last week ordered a crackdown on radio and TV network advertising, said the new task force has two functions: to find ways to step up FTC's enforcement of the controversial anti-price discrimination law, and to find ways to "more plainly and forcefully" interpret its requirements to businessmen.

The move is another step in Kintner's campaign to use the art of persuasion to spread understanding of the trade regulation laws FTC enforces. Top legal staffers assigned to the task force will consider, for instance, whether FTC might get more voluntary compliance with Robinson-Patman by issuing staff guides—booklets based on past FTC cases.

As if to underscore his statement that the task force does not mean FTC is backing off from formal prosecu-

MORE NEWS ABOUT MARKETING ON:

- P. 108—Physical distribution moves up as a major, cost-saving operation.

tion to enforce R-P, FTC also filed price discrimination charges against 14 leading carpet makers. It charges that rug manufacturers are using volume discount systems that, in effect, discriminate against small retailers. Hearings on similar FTC charges filed against Mohasco Industries and Bigelow-Sanford Carpet Co. have not yet begun (BW—Mar. 21'59, p92).

• • •

Supreme Court Upholds FTC Ruling Taking the "Liver" Out of Carter's Pills

One of the longest Federal Trade Commission advertising crusades came to an end in the Supreme Court this week. Carter Products, Inc., makers of Carter's Little Liver Pills, lost a last-ditch effort to upset FTC's tough order against its advertising. The court refused to hear the case, thus giving the commission a victory in its 16-year fight to stop claims that Carter's pills will, among other things, increase the flow of liver bile. Further, distribution of any advertisement in which the word "liver" is used, remains under the FTC ban.

In another action, the Supreme Court agreed to review a lower court ruling that Anheuser-Busch, Inc., did not violate the Robinson-Patman Act by cutting its premium beer prices in the St. Louis area while maintaining higher prices in all other sections of the country.

The Circuit Court of Appeals ruled that there cannot be price discrimination except "where there is some relationship between the different purchasers which entitles them to comparable treatment." FTC fears this would limit price discrimination actions to cases where dealers compete for the same customers.

This ruling, FTC and the Justice Dept. hold, "largely nullifies" the law's application to territorial price discrimination. The case, if the Supreme Court decides against FTC, could immediately affect price discrimination charges pending against Pure Oil Co.

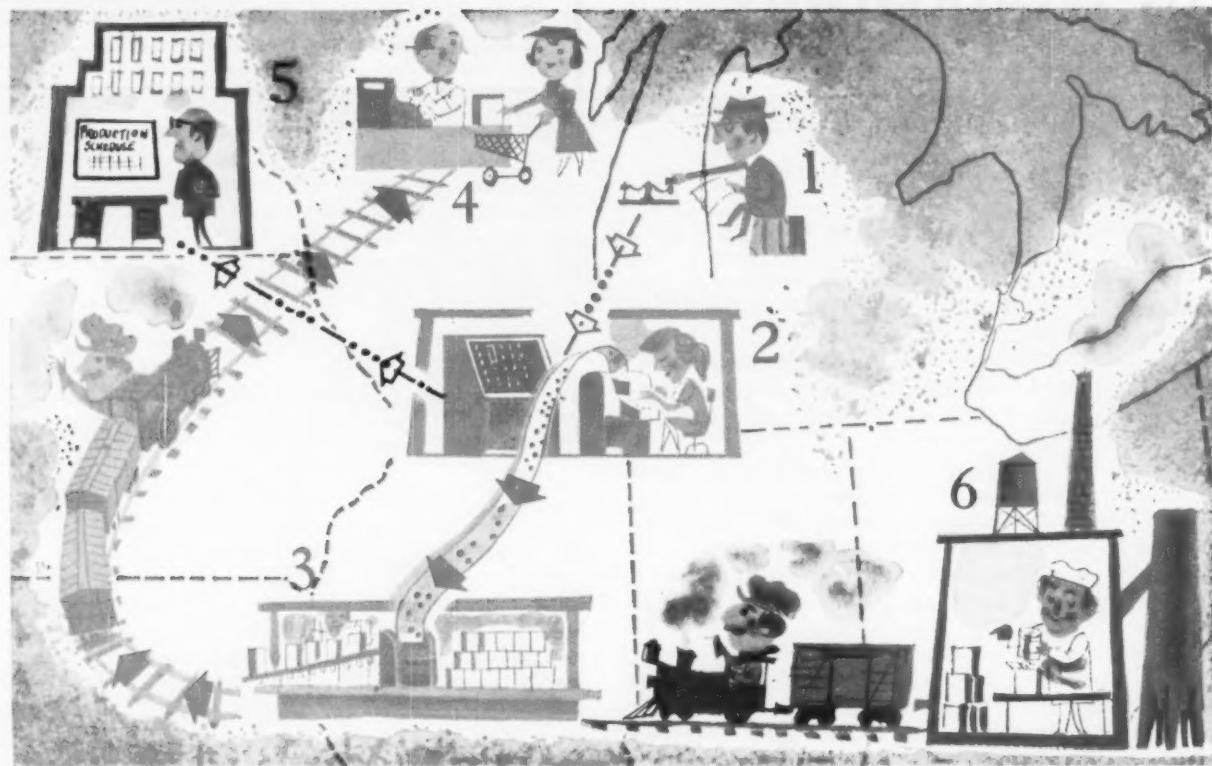
• • •

Charles of the Ritz Weds Venus Pencil In Move to Diversify From Beauty Trade

In its first expansion outside its own field, Charles of the Ritz, Inc., a leading cosmetics maker and beauty salon operator, is buying Venus Pen & Pencil Corp. The price was not stated, but \$7-million is a conservative estimate, according to a spokesman.

Venus will be kept intact and will operate as a wholly owned subsidiary.

Charles of the Ritz says that both its cosmetics and its beauty salon business (it has 22 salons) have grown steadily, with a "tremendous" increase during the past year. It had acquired two other cosmetics companies and wanted to spread its eggs around in other baskets. "Prudence, financial ability, and ambition dictated this move," the company reports.



PILLSBURY'S new distribution system, oriented to the customer, works like this: Salesman (1) wires an order to distribution service center (2) equipped with data processing gear. Center Teletypes

order to warehouse (3) within cheapest shipping range of customer (4). Center Teletypes order to headquarters (5) for use in production scheduling and to plant (6), which ships to warehouses.

New-Fangled Routes Deliver the

In industries from softgoods to industrial chemicals, it has become the fashion to streamline physical marketing—the distribution machinery that takes goods from the factory and delivers them to the customer.

Sometimes the modernization reshapes a company's entire operations. In its fullest development, the reorganization of physical marketing calls for appointment of a distribution manager, equal in rank and responsibility to managers of marketing and manufacturing. His job is to run a department combining a number of previously scattered functions: finished goods inventory control, transportation and traffic, warehousing, order processing, credit, customer service, container design, sometimes production planning.

• Case Studies—The maps above depict the new look that has been brought to physical marketing in two quite different companies in the food industry—a leader in putting the new concept into practice. Pillsbury Co. is a manufacturer of flour products and American Stores Co. a retail grocery chain; they started their renovation from different directions, but in both cases the effects have been widespread.

Five years ago, Pillsbury had no distribution service centers such as the one on the map at left above. Instead, there was an ill-coordinated batch of branch-controlled warehouses. About the only things that have stayed the same at Pillsbury are the plants and company headquarters—and even there procedures are a lot different these days.

At American Stores, dramatic savings have been achieved by applying new techniques of physical marketing throughout the company. The chain conservatively stayed aloof from the supermarket trend until 12 years ago, but now it boasts, among other innovations, a fast-moving, fully integrated meatpacking operation. American realizes "sizable" savings by slashing the number of times carcasses have to be handled—which reduces the need for both equipment and expensive hand labor. It saves a day's time by moving the meat on piggyback trains on top priority schedules—and more time by eliminating intermediate warehousing.

The system increases meat turnover, and this frees capital that otherwise would be tied up in inventory. American says the greatest savings, though, come from improved quality control,

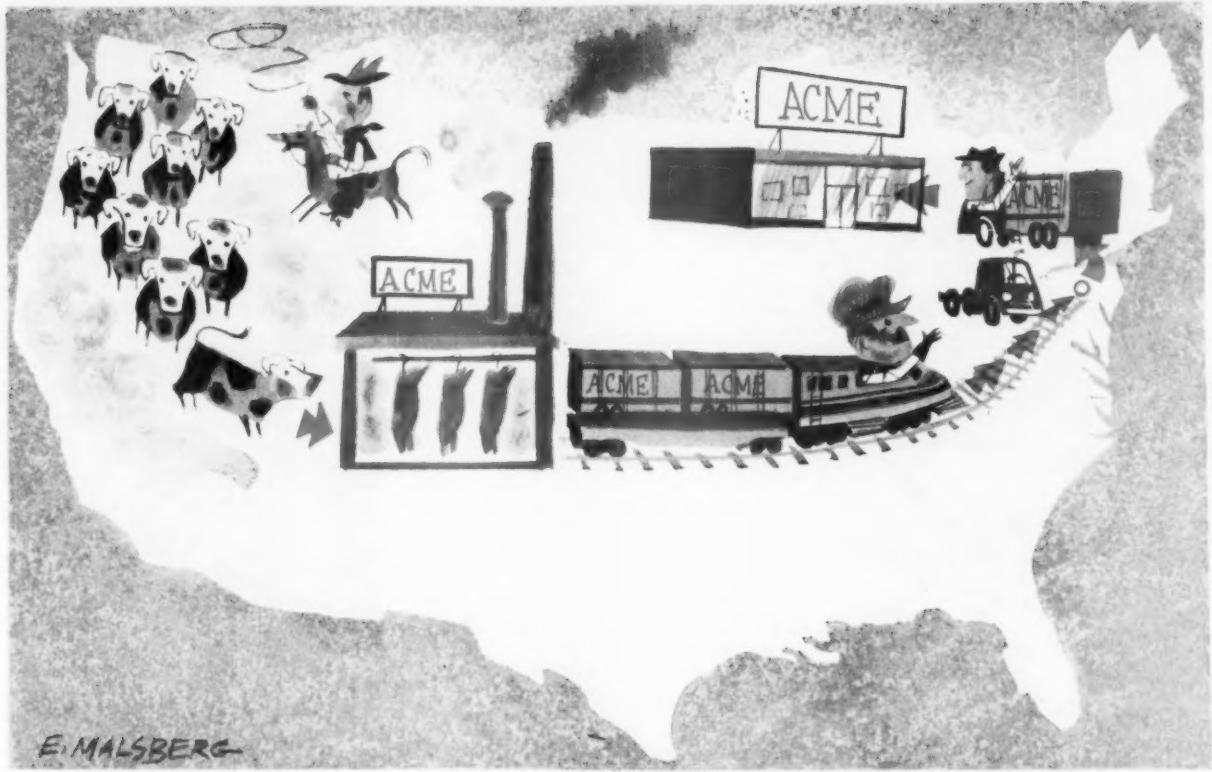
less spoilage and shrinkage. It can hit hard on the freshness theme in its consumer advertising. It's so delighted that it's planning a similar setup to handle all its veal requirements from a plant in Greencastle, Pa.

I. Reasons for Revision

The realignments of function that come with the new attention to physical marketing are often drastic and controversial. Ten years ago, distribution management was little more than a gleam in the eyes of some management consultants. Now that it is on the scene, some manufacturing men are showing resentment at loss of control over finished goods or production planning. And marketing men don't relish relinquishing their say over order processing and delivery scheduling.

But despite ruffled feelings, the new arts of physical marketing have won a firm place in U.S. business. There are three main reasons—cost problems, the availability of new equipment, and the availability of data processing gear.

• Up and Up—As the economy has shifted its emphasis from manufacturing to marketing, distribution costs have



E. MALSBERG

AMERICAN STORES moves meat to market by buying beef and lamb on the hoof in herd lots. At two plants in the Western sheep and cattle country, it slaughters and dresses the carcasses,

loads them onto refrigerated trucks, and rolls the vans onto piggyback trains. These speed directly to its major market areas, and trucks proceed to supermarket butcher shops.

Goods—Faster and Cheaper

rised markedly—to 50% of all costs of doing business, according to one widely credited figure. But companies have only recently realized how much of that 50% could be attributed to physical distribution.

Says Prof. Frank Mossman of Michigan State University: "In some industries, like lumber and automobiles, the cost of physical distribution actually exceeds all the cost of demand creation—advertising and selling." The American Management Assn. calls physical distribution "the third most important cost of doing business." Prof. Mossman says accounting techniques tend to bury physical distribution costs in other categories, such as manufacturing and selling expenses. Cost accounting, he says, still doesn't have a way to assess the part distance plays in distribution costs.

But when companies do figure out their physical distribution costs, they can often reduce them dramatically. Reports Paul J. Cupp, president of American Stores: "We can move goods through our modernized physical distribution system at about a sixth of the cost of the obsolescent seller-to-store delivery system."

- **Automatic Devices**—Technology has

helped make it possible to cut distribution costs. The postwar years have brought all sorts of new equipment to move goods, as well as novel combinations of older equipment. Specialized fork lift units, for example, can whisk palletized goods straight from factory to store shelves without a single use of hand labor. Three ancient enemies—rail, truck, and water transportation—have collaborated to create piggyback and fishyback methods of moving cargo.

Data processing equipment has been particularly important. It can handle all the complicated paperwork involved with goods movement. The machine can spew out shipping papers, credit clearances, billing records, and up-to-date inventories. At General Foods Corp., a company with high unit volume, the data processing units turn out 600,000 invoices a year. This equipment frees management of the routine job.

II. Renovation at Pillsbury

Pillsbury has taken advantage of the latest in physical marketing techniques in a program that management credits with a "very significant" contribution to

raising the ratio of net pre-tax income to sales from 2.9% to 4.9% in the last four years.

Formerly, distribution at Pillsbury was scattered through production and sales divisions, with little liaison in between. Production made the goods; sales sold them. Neither division had precise responsibility for what happened to them between manufacture and delivery.

Essentially, Pillsbury worked on the theory that goods should move directly from plant to customer. Plants should be as close to the customers as possible, and each should produce the whole Pillsbury line. Since it's cheapest to ship by carload lots, orders should move from the plants that way.

- **Backfiring**—This long-established system began to creak as Pillsbury expanded product lines and its customers consolidated. No one plant could produce the full line any longer. Large buyers—about 10% of all food stores account for almost 70% of volume these days—began demanding more and more mixed lot shipments and prompter delivery. Pillsbury found itself hauling products from plant to plant to fill the mixed orders. Plants were devoting more

CREATIVE IMAGINATION in Specialty PAPERS *



★ Can it be made of PAPER?

Western Union thought so. Knowlton Brothers helped prove it could. Although others had failed, Knowlton produced a high-quality base for electro-sensitive paper used in the Western Union Telefax system.

ONE OF MANY SPECIAL-PURPOSE INDUSTRIAL PAPERS

Knowlton Brothers have the scientific and technical manpower, the research facilities, the pilot-plant machinery . . . and above all, the creative imagination to develop, or make to rigorously maintained specifications, industrial papers for applications where paper was never used before. Chances are, the car you drive, the plane you fly in, has a Knowlton-developed paper in a vital engine part.

*Don't Wonder Any Longer;
Ask Knowlton Brothers*

Maybe the relative lightness of paper interests you . . . or the economy . . . the availability . . . the uniformity. But don't wonder. Just ask Knowlton Brothers.

A Few Conventional Uses of Knowlton Papers: To . . .

Conduct	Dialyze	Cushion
Laminate	Shape	Rupture
Copy	Insulate	Shield
Contain	Record	Synthesize

Development Possibilities are Unlimited.



WRITE for free copy of the helpful book, "Creative Imagination in the Development of Technical and Industrial Papers." PHONE or WIRE for a sales engineer to call.



Dept. 711, WATERTOWN, N. Y.

and more space to storage; at one location, there were nine off-premises warehouses.

By late 1955, Pillsbury had set up 100 branch warehouses, primarily to supply smaller accounts and to make fill-in shipments to carlot buyers. These warehouses were controlled by 33 sales offices, each with its own accounting, credit, and order processing operations. "Turnover was slow, warehousing costs were high, and there was no effective central control over inventories," the company complains as it looks back at the old system.

- **Master Plan**—In revamping the system, Pillsbury started at the top. It appointed a director of distribution, equal in status to the heads of manufacturing and marketing. With the manufacturing executive, he translates the annual sales forecast into a master plan for both production and distribution, based on three axioms:

- All costs related to goods movement must be assigned to the distribution department.

- Distribution must be oriented to the customer—not to the plants.

- Selling, warehousing, and data processing should be kept separate.

The map on page 108 illustrates how the system handles a typical order. For the company as a whole, it has brought many changes. Each plant now specializes in a few lines; this permits longer runs and better grouping of knowhow. Plant warehousing has been virtually abolished, since goods flow in carload lots to the various distribution warehouses.

- **Nerve Centers**—Four regional nerve centers control the warehouses. Since the plants are constantly replenishing warehouse inventories, the centers can allot shipments simply on the basis of the lowest transportation cost. The system guarantees third-morning rail delivery anywhere in the U.S.—a smart contrast with the previous system, under which it sometimes took as long as a week just to get an order under way from a plant.

With order processing consolidated at four centers, Pillsbury can afford high-powered data processing equipment at each location. It has also established accounting units at the centers. Invoices go out to customers as soon as the goods arrive, and receivables payments flow back much faster. Thanks to the data processing gear, credit can be given a rapid O.K. Traffic is handled at the centers, too, to give it the most efficient customer orientation.

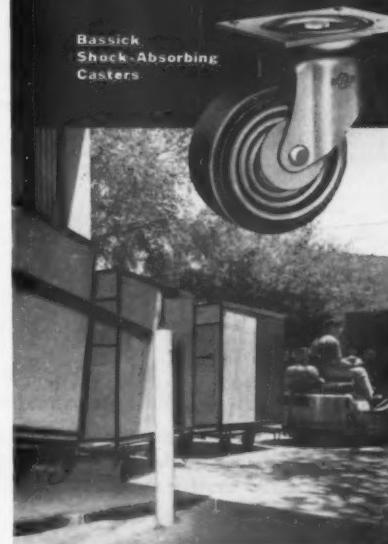
Now that field sales offices no longer have to worry about distribution, they can concentrate on selling. Pillsbury has expanded from 33 branches to 52 sales offices.

- **Variations**—Many other companies

Spread Out Plant Solves Handling Problem

Jantzen reports 98% reduction in caster replacement with Floating Hubs

Bassick
Shock-Absorbing
Casters



"Floating-Hub" casters on power-pulled truck trains got trial run 5 years ago—are still going strong at Jantzen Inc. Previous caster life: 6-8 months.

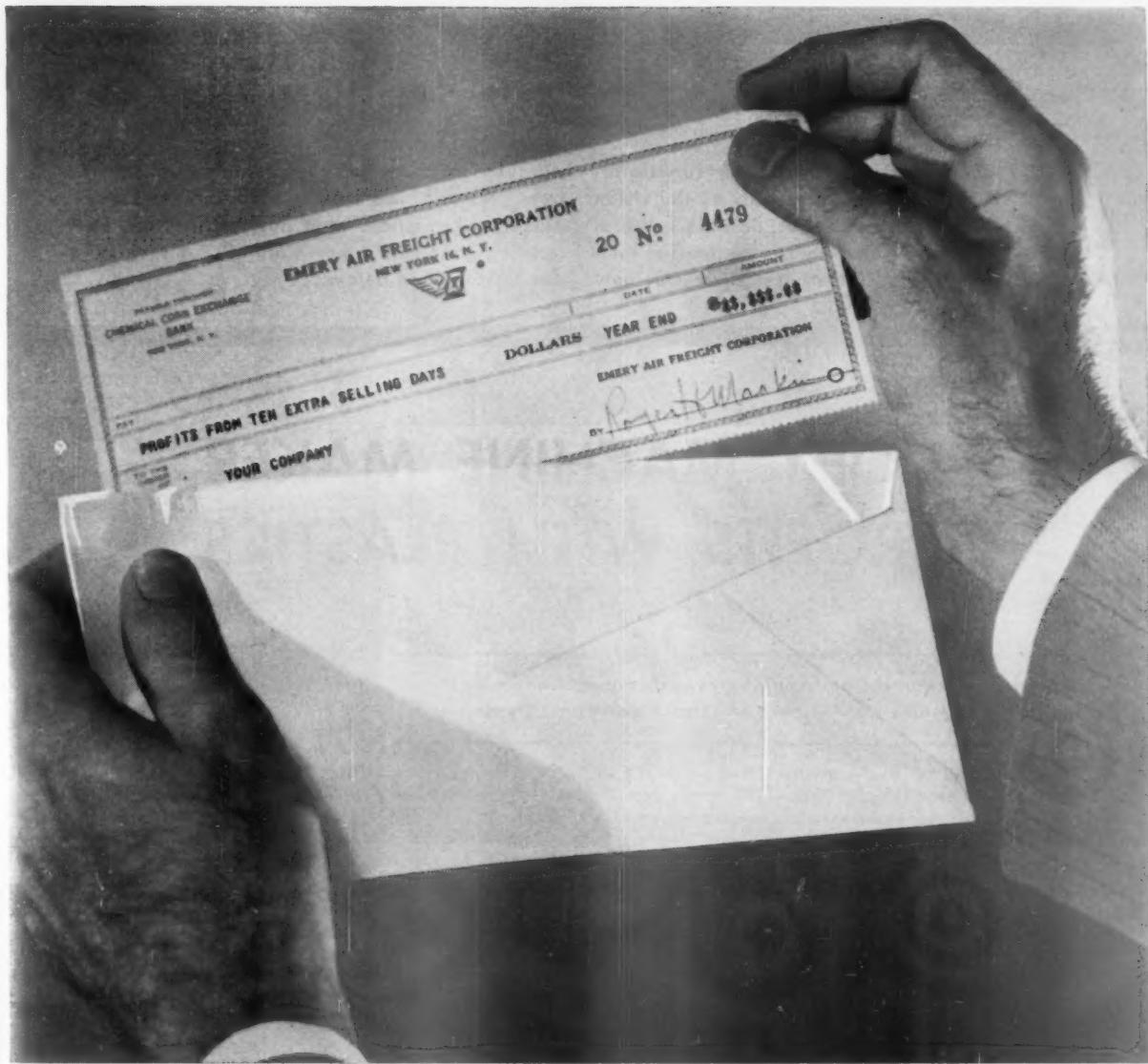
When Bassick shock absorbing, "Floating-Hub" casters replaced conventional casters on power-pulled truck trains moving between buildings at Jantzen Inc., makers of sportswear in Portland, Oregon, replacement problems stopped short.

Previous casters had to be replaced after 6 to 8 months. With "Floating-Hub" casters, now five years in service, only 3 out of over 160 have had to be replaced—and those for minor spindle wear. Wear and tear on trucks themselves is also greatly lessened.

You don't have to have a fragile or delicate product to put Bassick "Floating-Hubs" on your handling team. These shock-absorbing casters often more than pay for themselves by drastically reducing maintenance and replacement of casters, trucks, floors or roadways. And there are many other Bassick casters to keep industry moving—efficiently. THE BASSICK COMPANY, Bridgeport 5, Conn. In Canada: Belleville, Ont.

9.24





Christmas bonus

A big one if you use Emery Air Freight to speed holiday shipments. For example, we made a 650-mile door-to-door delivery of 38 cartons of toys in 6 hours for a manufacturer when unexpected demand wiped out a retailer's inventory during a Christmas buying rush.

The result: Our customer made an extra profit of \$1200. His retailer, after deducting air freight charges, made an extra \$362.69.

Emery can save you up to 10 days on long distance domestic shipments. Think what 10 extra days will mean to you in your peak selling season—in added production time and added selling time.

Emery Air Freight provides overnight service, coast to coast, comparable service to anywhere in the U.S. and overseas. You can air freight direct to dealers. Or ship by air in bulk to central distribution points and then reship by parcel post.

- The cost? Surprisingly, Emery Blue Ribbon Service is lower in many instances than regular air services.*

	2500 MI.		1700 MI.		700 MI.	
	Air Emery	Air Express	Air Emery	Air Express	Air Emery	Air Express
50 lb.	\$25.54	\$39.70	\$20.93	\$28.50	\$14.77	\$12.50
100 lb.	40.90	77.40	32.30	55.00	20.10	23.00
200 lb.	73.00	154.80	55.20	110.00	31.80	46.00

*Rates apply to most commodities between most major markets.



EMERY AIR FREIGHT CORPORATION
801 Second Avenue, New York 17, N.Y. • National and International Blue Ribbon Service.



PLASTICS EXCEL AS ORIGINAL MATERIALS

The usefulness of attractive, functional thermoplastics seems limited only by the vision and ingenuity of new product designers. Which is to say that there are virtually no limits to their application. Some of the most successful new

products started with their creators thinking in terms of the wide variety of properties these plastics offer, rather than how plastics can be interchanged with other materials. A few examples are cited below.

COPY MACHINE MAKER PROFITS WITH PLASTICS

Unusual production method contributes substantial economies in forming the handsome outside case of extra-high-impact Styron® 480

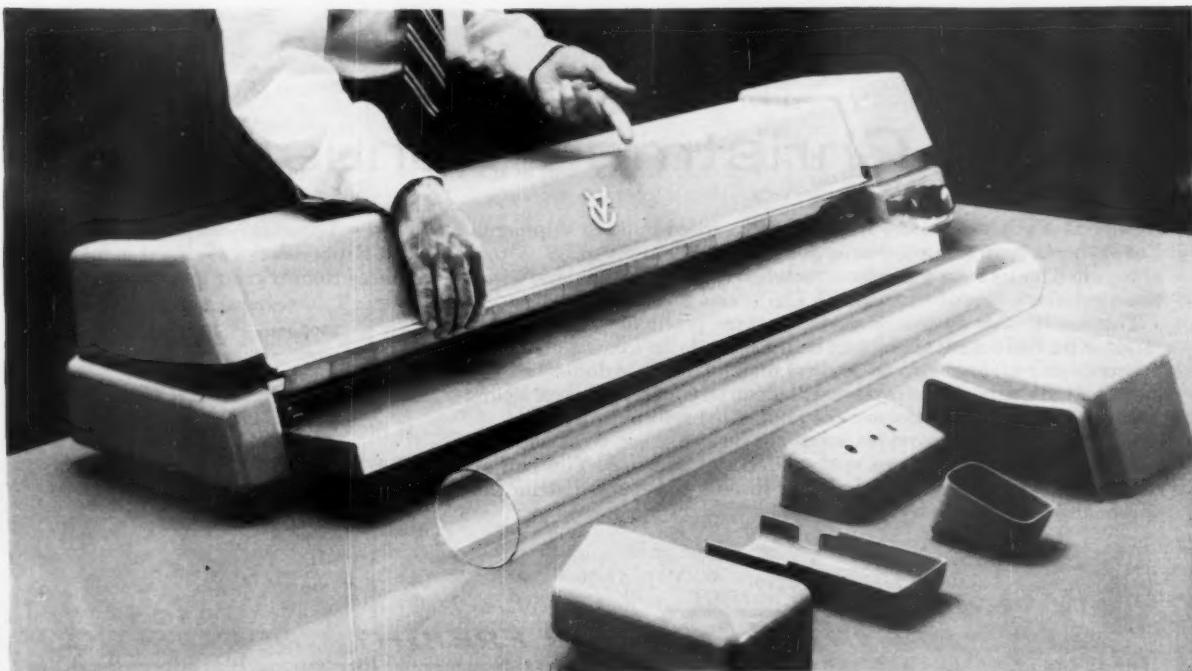
The manufacturer of this copying machine derives many benefits from making the housing and many operating parts of Styron 480. Perhaps the most significant one is the production economies gained in vacuum forming the four-foot long housing. The latest techniques provide close tolerance con-

trol, while the savings gained by much lower die costs and use of simpler, less expensive vacuum forming machine equipment are substantial.

Careful, imaginative product planning with Dow thermoplastics paid off in another way. An attractive shark-skin finish is integrated in the housing.

Since the finish is built-in, it cannot wear or rub off. Also, it eliminates the need for painting and other finishing operations.

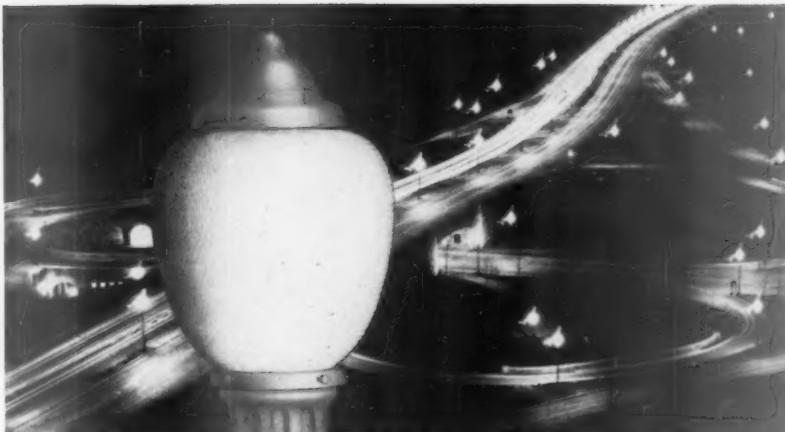
Used in the interior components also, Styron 480 offers excellent resistance to chemicals and complete freedom from corrosion, adding value and long lasting utility to this new product. In fact, it can be safely said that this versatile Dow thermoplastic does an outstanding job in this application at a low per-unit cost.



ZERLON 150: *no break for boys*

There'll be plenty of disappointment among the younger set when they discover their sling shots and air rifles won't shatter this street light globe. It's made of Zerlon^{*} 150, a new Dow plastic that combines outstanding transparency and strength. When struck sharply, Zerlon 150 "stars" rather than cracking or shattering. This property will sharply reduce maintenance and replacement costs for municipal governments. What's more, Zerlon 150 actually provides more uniform diffusion of light than the material normally used in this application.

*TRADEMARK



HARDHEADED *performance pays*

Sandlot grid stars wear this football helmet made of super-tough Ethocel[®]. This lightweight, high gloss material is called the aristocrat of the thermoplastics because it has the best resistance to impact, especially at low temperatures. Thus this molded helmet offers a maximum of safety to young line chargers. Ethocel also resists weathering and is easy to clean. Like most Dow plastics, it is available in a wide range of colors. Its exceptional molding characteristics make large one-piece moldings practical and economical.

OTHER SALES-SPARKING PRODUCTS
made with Dow plastics

STYRON 440—Made of Styron 440, these rigid vacuum cleaner parts are rugged, yet lightweight and attractive. (Flexible parts are vinyl.) Another example of original designing with Dow thermoplastics.

STYRON 440—Any wood grain or color can be simulated to make these table and chair legs match any decorating scheme. The designs are "built-in," so they'll keep their good looks longer.

STYRON 475 & 666—The excellent moldability and dimensional stability of both were put to use in this real clock that children of all ages can put together and take apart.

BEHIND THE SALES SCENE there's often an interesting story about Dow plastic materials and new production methods . . . a story that may be pertinent to the new product you're planning. Write to **THE DOW CHEMICAL COMPANY**, Midland, Michigan, Plastics Sales Department 1515AF11-14.

Industrial molding materials • Packaging materials
Building products • Paint and coating materials

THE DOW CHEMICAL COMPANY
Midland, Michigan



(Advertisement)

The man from Cunningham & Walsh



How do you get larger displays for your product in supermarkets? Is more personalized service possible for chain stores? If so, how? Jerry Feniger, C&W's Vice-President for TV-Radio Programming, has the answers to these questions. By working on the spot, C&W advertising men are gathering the up-to-date facts on America's buying and selling patterns. That's why more than 4000 hours were spent in the field last year by the men from Cunningham & Walsh Inc. Offices located in: New York, Chicago, Detroit, Los Angeles, San Francisco.

**at your next meeting
1 BIG picture
will be worth 10,000 words**

...this new VU-LYTE II shows BIG, clear pictures on a screen or wall. No slides are needed.

Beseler's VU-LYTE II Opaque Projector projects your charts, maps, papers, your watch, this magazine, anything. It projects instantly, in full color or black and white, to a meeting of from 4 to 400. The VU-LYTE II is simple, quick, precise. It is your most effective aide to successful business communications.

**THE VU-LYTE II
IS TO THE EYE
WHAT A LOUDSPEAKER
IS TO THE EAR**

Write for a Free Demonstration, and ask for the brochure: "11 Checkpoints For Better Visual Meetings".

CHARLES Beseler COMPANY
EAST ORANGE, NEW JERSEY



**"Zorro!"
for power tools to your liking**



Lets you change from 1000 to 3000 rpm and back to get just the right speed for different jobs. $\frac{1}{2}$ " Jacobs geared chuck, AC/DC motor delivers maximum torque under load.

35 PIECE ACCESSORY AND TOTER KIT, \$9.95

Say WEN for Sabre Saws, Solder Guns, Sanders
5810 NORTHWEST HIGHWAY, CHICAGO 31

in the food industry are following Pillsbury's lead—Armour, Heinz, and General Foods among them. General Foods plans by 1961 to have consolidated warehouses, service centers, and sales offices set up in 16 or 17 locations. It believes in owning all its warehouse space; Pillsbury leases its storage facilities to give it more flexibility.

III. Retailers Act

On the retail side, most of the big chains and affiliated independents have also streamlined their warehousing and distribution methods. The problems of food stores are somewhat different from those of manufacturers, though. Headquarters must anticipate the needs of a number of individual store managers—and then coordinate its planning with the availability of storage space and with market conditions. American Stores admits it must keep a constant vigil on buyers' optimism. Eving 40,000 cases of applesauce, John Crowe, American's distribution executive, says: "Occasionally they slip one past us. We'll have to run a lot of 'eight for a dollar' applesauce ads to work this stock down."

• **Visionary**—In the future, the chains may achieve their greatest distribution economies at the store level. Wroe Alderson, Philadelphia marketing and management consultant, thinks chains could eliminate daily ordering by store managers if they stocked stores according to statistical controls. "Most of the factors causing fluctuations in store sales patterns can be predicted by the chains," Alderson says. "For instance, a chain may move an extra 150,000 hams through a price promotion. Unpredictable elements, like weather, will only account for a variation of 10,000 at most." Some chains are actively considering Alderson's suggestion.

Chains, with their central warehousing, have speeded the movement away from direct deliveries by suppliers to individual stores. With central warehouses, most of a store's inventory can be kept on the shelf. This accelerates turnover and puts high-rental retail space to productive use. The chains acknowledge that they are happy to keep some supplier salesmen and deliverymen out of their stores. It reduces the chances of payoffs for giving favorable shelf position to a supplier's brand and cuts down on backroom pilferage.

Alderson expects most chains and affiliated independents to move more deeply into distribution warehousing for produce, meat, and frozen foods—and eventually for bakery and dairy products as well. His only fear is that the tremendous power this will give retailers over manufacturers might throttle innovation. **END**



THE HEAT'S ON...

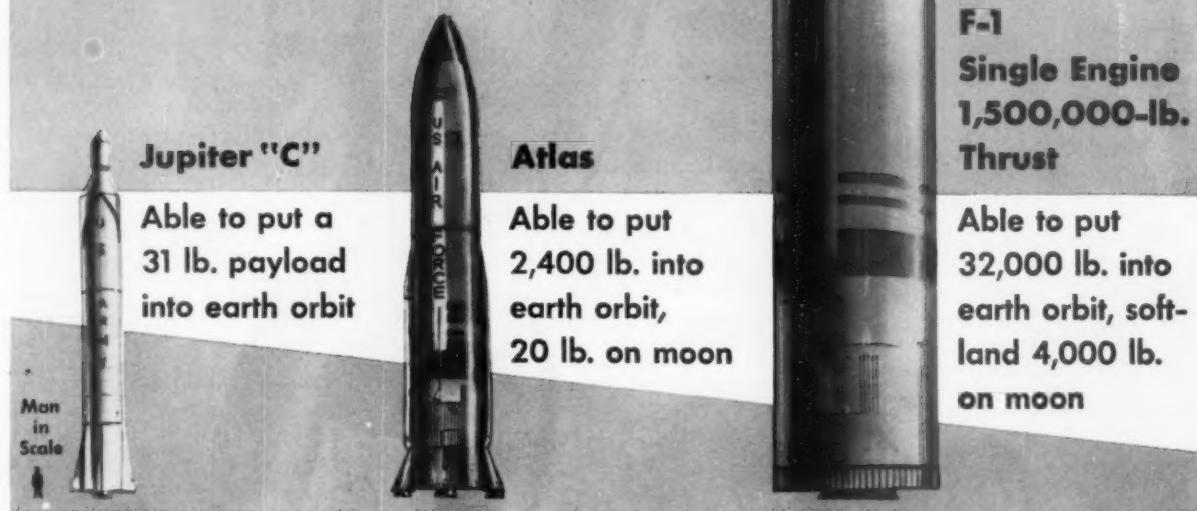
but no matter how hot it gets, Campbell Chain can take it. Fact is, Campbell Chain is made for use under all conditions. Campbell makes a *complete* line of quality chain and chain assemblies—both welded and weldless—in every size and grade. And the Campbell nationwide network of factories and warehouses assures you immediate delivery and service. **CAMPBELL CHAIN COMPANY.**

FACTORIES: York, Pa.—West Burlington, Iowa—Alvarado, Calif.—WAREHOUSES: East Cambridge, Mass. Atlanta, Ga.—Dallas, Texas—Chicago, Ill.—Seattle, Wash.—Portland, Ore.—Los Angeles, Calif.

THE ONLY CHAIN COMPANY WITH COAST-TO-COAST FACTORIES & WAREHOUSES



Here's How the Basic Rocket Engines Will Compare



The Thrust to Conquer Space

Sometime late in 1962 or early in 1963, the U.S. could—if it wished—have a single rocket engine with more than 1.5-million lb. of thrust ready for static testing. And about one year later, four of the giant engines would be ready to be harnessed together in a rocket big enough to put an 80-ton satellite into orbit around the earth, or to soft-land 10 tons on the moon.

This is the feasible schedule for the earliest of the second generation of U.S. rocket engines, according to the National Aeronautics & Space Administration. It agrees with a delivery schedule that looks reasonable to Rocketdyne, the North American Aviation division that holds the "major components" contract for the multi-million-lb. rocket engine, usually called the F-1.

That's a huge stride beyond even the Russian first-generation engines. The Soviet T-3 has a 700,000-850,000-lb.

thrust, depending on the type of fuel. No one knows what the Russians' second-generation engines will do. As for the U.S., the largest existing rocket engines are the Atlas and the Titan, rated around 330,000-370,000 lb.

• **The Big If**—Of course, the optimistic U.S. estimates for the second-generation engine may be stretched out by the proposed cut in NASA's budget next year, perhaps to 1965 or 1966. It is estimated that the first of the 1.5-million-lb. engines will cost around \$125-million apiece. Later, this can probably be cut to between \$25-million and \$50-million. Either way, it's cheap compared to the first Atlas, which cost \$1-billion to develop and build.

Unlike the Atlas, the F-1 is not designed primarily for military use. Some rocket men think it may find military utility 10 years or more from now, but its present purpose is chiefly research. Scientists need such an engine to be

able to think in terms of manned flight in interplanetary space. But the lack of military purpose makes it hard for NASA to sell Congress on a budgetary priority for the 1.5-million-lb. engine.

• **Fully Possible**—Technically, it's perfectly possible to develop the giant engine. The research problems are not much different from those already solved on other rocket projects, and acquired experience should make solution quicker.

This doesn't mean that the job is a simple matter of scale-up. There are basically no new problems to be solved, but there are many details that will have to be approached from new directions. Much of the conventional engine hardware will have to be refined; new materials will be needed, and fresh thinking on how to marry a jumbo engine to an equally gigantic rocket shell.

All this will take time, which is precisely why most rocket experts main-

for power...



for speed...



for precision...



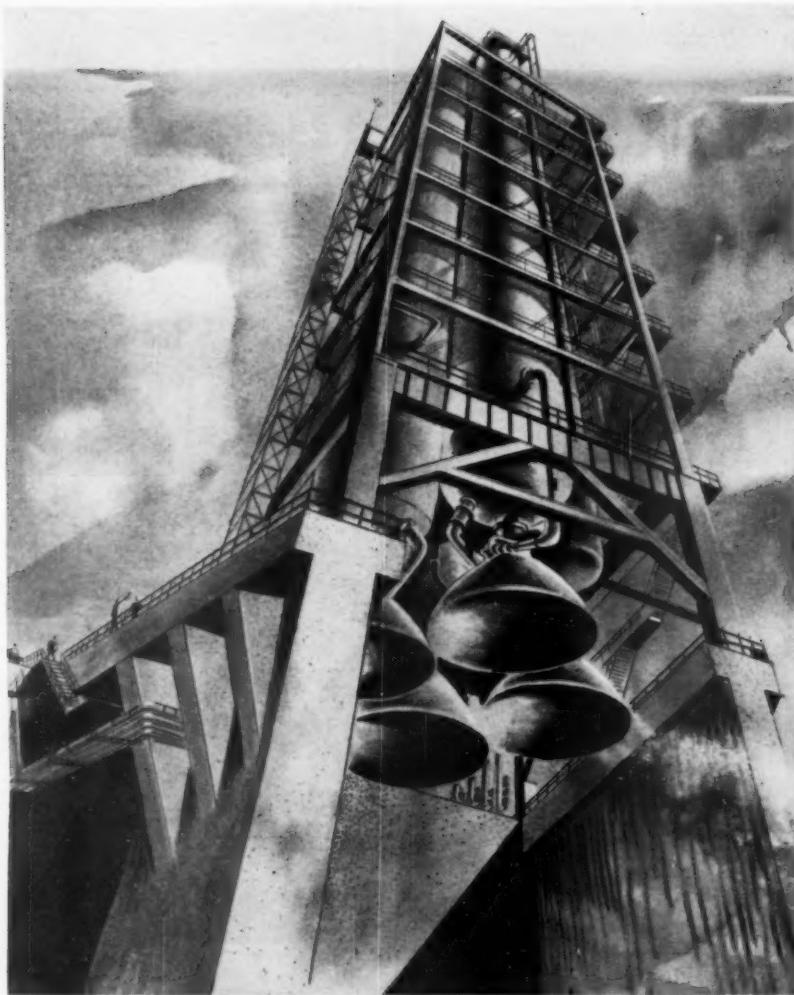
for product performance...

use Fafnir Ball Bearings

You need power in an earthmover...speed in a racing car...precision in a planetarium projector. Whatever you need in your product, Fafnir has the diversity (over 10,000 types and sizes) and the capacity (six plants, over 1,200,000 square feet of production space) to supply the ball bearings you want, when you want them. For diversity...for capacity...turn to Fafnir. The Fafnir Bearing Company, New Britain, Connecticut.



FAFNIR
BALL BEARINGS



STATIC FIRING STAND designed for Edwards Air Force Base will be able to test fire two Rocketdyne F-1 1.5-million-lb. rocket engines simultaneously.

tain that a crash program now would not help much. A. O. Tischler, director of liquid propulsion research for NASA, figures a crash program could save one year at most, and might easily add 50% to the final cost of development. On the other hand, had the contracts gone out a couple of years ago, the huge engine could easily have been ready for use next year. Right now, propulsion design is running well ahead of frame design; the time is fast approaching when the leader will have to slow down to let the other catch up.

The experts agree that the big problems now are matters of engineering, centering around the wedding of engine and frame. Such work must proceed at a logical pace.

- **Combustion Chamber**—Take, for example, the burning of three tons of fuel per second in a chamber about the size of a small boiler, at a temperature above 5,500°F. Just putting this much fuel through an injection system is a tremendous feat by ordinary engineering standards. Pumps to handle

this volume of liquids are probably available, but finding the shape of the combustion chamber to take that sort of punishment will be quite a trick. Some preliminary work by the Air Force on a 1-million-lb. engine indicates that the solution is in sight, but as yet no contracts have been let for the larger engine.

About the only way to speed up this part of the job would be to assign it to several companies simultaneously. The reason for that lies in the peculiarity of rocket development. One researcher claims that not even the Russians can say in advance how the combustion chamber should be designed for any given rocket. This part of rocketry is still more art than science. There must be a fairly long period of groping tests to find the best shape.

- **Costly Tests**—Picking the best of several chamber designs can be costly, too. Earlier work, including the Atlas and the Titan, has shown that a little advance studying can be done on small models. But it costs between \$100,000

and \$200,000 for a full-size test of each promising design, although some equipment can be salvaged from earlier tests. The test process is essentially a painstaking matter of trial and error; and most engineers expect it to stay that way until the fundamental nature of combustion has been explained.

NASA is already building stands at Edwards Air Force Base in California for static firing test when working models of the giant engine are ready. One stand, dubbed 1-A, has been completed; it's a converted Atlas firing stand and will be used to test single engines. A second (2-A) will be ready next year to test thrust combustion chambers. The design contract for a third has just been awarded to Aerojet-General. It will be able to test simultaneously two of the 1.5-million-lb. engines (drawing, left), and is tentatively scheduled for 1961.

- **Liquid Fuel**—Final testing of the engine should be simple and matter of fact, at least compared with finding the right design of the combustion chamber. As of now, the only point on which the designers have committed themselves is that the first 1.5-million-lb. engine in the U.S. will use liquid fuel, probably burning kerosene in liquid oxygen. Existing solid fuels are not believed to have the thrust needed to lift so huge a rocket off the ground. But no matter what type of combustion chamber is used, the testing should be routine.

To help matters along, there's a tacit understanding between NASA and Rocketdyne that no new ideas will be incorporated into the first engine unless it is absolutely necessary. David E. Aldrich, F-1 program manager for Rocketdyne, says this is to save time and money and to ensure reliability. Thus there's a good chance that the F-1—and even its combustion chamber—will resemble more than anything else a big brother of the Atlas or Titan.

- **Fuel Tanks**—This picture may be changed a bit by future contract awards, but no delays or radical changes of design are expected. For example, no contract has been let for the F-1's fuel tank design. And it's quite possible with the many new materials that are available that some system will be evolved simpler than the heavy, bulky insulating system now used to protect the liquid fuel tanks of a big missile.

The tank problems, though, are fairly straightforward. NASA's Tischler says that "with the larger quantity of cold material (Lox) to store, engineers may even find the technical solution much simpler to achieve." In essence, it's rather like storing ice; it's easier to figure out how to store a big ice cube than a small one. So, if there are last minute changes in the design of the

A NEW DESK FROM **GF**...

designed by one of America's
great architectural firms



GENERAL FIREPROOFING

YOUNGSTOWN 1, OHIO



NOW TWICE AS FAST!

**Not
"just another"
photocopy
process**

The new

Photorapid ELECTRA

with the revolutionary

MAGI-PLATE

by GEVAERT

Once again science keeps pace with the space age! This newest Photorapid Electra combines all copying operations, and does it twice as fast—with quality reproduction unequalled by any other machine!

Copies anything...from any color...in any light—whitest whites, blackest blacks, sharpest details! Anyone can learn in 5 minutes to make perfect copies!

AND NOW—with the revolutionary aluminum Magi-Plate by Gevaert—the Photorapid Electra makes metal effect plates right in your own office! Ready to roll in just 10 seconds—for only 39¢ complete.

Contact your nearest Photorapid office or mail this coupon today!

Photorapid

EASTERN DIVISION

Dept. BW-2
145 Madison Avenue
New York 2, N.Y.
Phone: MAT 9-0678

CENTRAL DIVISION

Dept. BW-2
120 Ontario Street
Chicago, Illinois
Unipex 8-1600

WESTERN DIVISION

Dept. BW-2
142 Oregon Street
Seattle, Washington
Oregon 8-9025 • Dinkirk 8-7291

We would like a free trial of the PHOTORAPID ELECTRA and MAGI-PLATE in our office, without obligation. Dept. BW-2

Name _____

Office _____

Firm Name _____

Address _____

City _____ Zone _____ State _____

Phone _____

fuel tanks, they are likely to be on the side of greater simplicity.

The same logistical problems that have to be solved for any new engine are still ahead of the F-1, compounded by the rocket's vast size and the enormous amount of fuel it will need. But again, the basic problems are matters of engineering. Such things as the fact that F-1 will have to take on fuel from underground storage vessels instead of from tanks. And the need for new countdown procedures—a job more tedious than difficult.

- **Combination**—Once the concept of the F-1 has been accepted, there will be the problem of fitting it into a multi-rocket system. It is unlikely that the 1.5-million-lb. engine will ever be used primarily as a single unit. The present thought is to combine four F-1 engines into the base stage of a multi-stage space rocket called Nova. Two of the engines would be gimbaled to give the rocket directional stability. The whole vehicle would be squat and thick, although above 200 ft. tall.

NASA thinks it will take another year to work out this marriage, after the individual engines are ready. It would take even longer for fancier combinations, in which the F-1 would serve as a rocket building block.

The hardest part of the marriage would be achieving reliability in staging; it has always been tough to get the various stages of a rocket to work as a reliable whole. Looking back, many experts blame staging troubles for the continued failures of the Vanguard. They argue that the individual stages were reliable, but that hooking them together brought too much complication and chances for failure.

- **Value of Experiment**—With Nova, the staging would be difficult, but it should be eased a bit by the experience gained with Vanguard. For one thing, it is planned to use a single F-1 engine for the second stage of Nova, thus using the same propellants as the four engines of the first stage. Only the third stage would have a different engine and fuels, this time a 600,000-lb. job. In the third stage it is planned to use high-energy propellants that by their nature will ignite spontaneously on contact. Such fuels would obviate the need for a radio-controlled igniter system, and would reduce the need for complex, and all too fallible, mechanical systems.

Even in the third stage there is a trend toward conformity. NASA people are talking about arranging their designs so that Nova's third stage could be interchangeable with the last stage of an earlier rocket. Best candidate for this role is Project Saturn.

Eventually, Nova could have three, four, or five stages, depending on the mission. But it will try to stick to simple systems, with a minimum of new



© ATC

Now... a new economy in cigarette packaging made possible by gluable coatings of ALATHON®

POLYETHYLENE RESINS

Because of a new process that makes certain polyethylene resins gluable, packages of coated boxboard may now be filled and sealed at the high speed necessary for economical operation. This process, which was developed by the Lowe Paper Co., using Du Pont ALATHON 16 polyethylene resin, is used on the new Dual Filter Tareyton sample cigarette pack.

This means that, for the first time, the large-volume packager can take advantage of the valuable properties and substantial economies of polyethylene coatings on boxboard packages.

These new gluable PG POLYEON coatings

are perfect for a variety of packaging jobs in other fields, too. Beautiful one-piece folding cartons coated with ALATHON can now do the job of inner wrap, carton and outer wrap, all in one. And, as an extra bonus, these coatings may be printed in a limitless array of colors with any standard equipment.

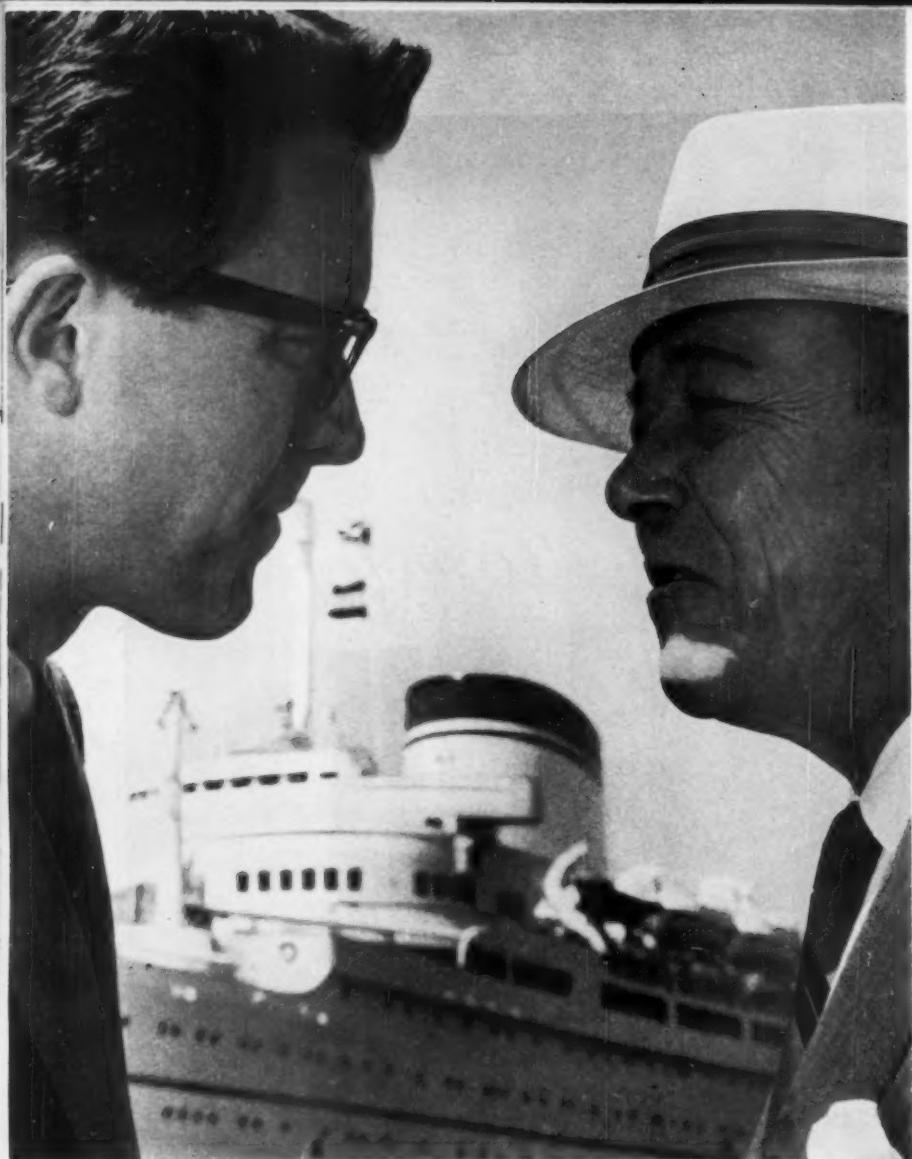
Why not have your packaging committee investigate the remarkable advantages of coatings of ALATHON? DuPont has an entire family of polyethylene resins developed exclusively for coatings. For more information write to: E. I. du Pont de Nemours & Co. (Inc.), Department D-1114, Room 2507A, Nemours Building, Wilmington 98, Del.

**POLYCHEMICALS
DEPARTMENT**



ALATHON® POLYETHYLENE RESINS

BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



"If you're thinking about a Corporate Trust or Fiscal Agency talk to the people at Chase Manhattan"

New York's leading bank has the men and the experience you need to handle Corporate Trust details at high-level efficiency.

* * *

Any corporation or governmental unit considering a bond issue will find it profitable to talk to the people at Chase Manhattan.

Chase Manhattan's Corporate Trust Department is staffed with people long experienced in every detail of acting as Trustee and Fiscal Agent. Their experience plus the technical skill they have acquired by long and large practice enables them to serve you efficiently and administer the many details of any agreement, no matter how complicated.

The range of Chase Manhattan trusteeship runs from the nation's biggest

toll roads to its most expansive utilities. Chase Manhattan corporate trust customers extend to every corner of the free world. These are merely statistics of experience. But they can be valuable to you.

If you are an officer of a corporation or a governmental unit, talk to the people at Chase Manhattan about your trusteeships. The address is 40 Wall Street, New York 15. The telephone number—HAnover 2-6000.

THE
CHASE
MANHATTAN
BANK

Member Federal Deposit Insurance Corporation

gadgets. The guidance will be carried in the last stage, unlike Vanguard, which put it in the second stage to conserve payload weight.

• **Excess Thrust**—Still, with upwards of 6-million lb. of thrust available to get it off the ground, Nova will undoubtedly carry a combination of the latest radio command, celestial, and inertial guidance systems. There will be plenty of thrust to allow duplication of electrical equipment, and so greater reliability.

On top of that, there will be enough excess thrust so that someday Nova could carry a modest payload to the moon, with enough fuel left to return a single stage—replacing the conventional nose cone—to earth, with two men and some of their equipment.

The basic idea is to keep the last stage engine simple, yet with enough excess power for almost any situation.

The first Nova, fullrigged for flight, will be an odd and clumsy sight compared with the needlelike Vanguard; it will probably look a bit like an overplump Havana cigar, with a "droop snoot." The "droop snoot" will be a winged return rocket.

For all this, the Nova's minimum of novelties and immense initial thrust should make it far more reliable on its first flight than any other rocket combination that has been fired in the U.S.

• **Other Hopefuls**—Besides Rocketdyne, there are half a dozen other companies waiting plans in hand for a government go-ahead on an engine with multi-million pound thrust. Among them, Aerojet General Corp.—a subsidiary of General Tire & Rubber-Thiokol Chemical Corp. are said to be actively seeking government backing to build giant booster engines. Aerojet has designed a liquid-fuel engine that, unlike the Rocketdyne concept, could easily be expanded as a single unit beyond the 1.5-million-lb. thrust; trade reports are that a 14-million-lb. ceiling could be reached.

Thiokol has talked openly of being ready to build a single solid-fuel rocket booster engine with a thrust of several million pounds. Such a gigantic solid-fuel rocket would have to be fueled and put together on site, but Thiokol says it has the equipment to do the work. The company also claims, in a proposal now being studied by the Air Force, that it can build such a booster for considerably less than the \$500-million that it will take to design and build Rocketdyne's giant liquid booster.

• **Matter of Cost**—Some knowledgeable rocket people think the Rocketdyne engine may be the only one of its size ever to be built in the U.S. They argue that Congress would probably balk at the added \$500-million it might take to develop an alternative system.

Then, by the time the third-generation rockets come along some decades

San Jose City Hall, San Jose, California - Architect: Donald F. Haines, San Francisco - General Contractor: Carl N. Swenson Co., Inc., San Jose;
Curtain Wall Contractor: Michel & Pfeffer Iron Works, South San Francisco.



Adios, adobe!

Pueblo San Jose, dating from the earliest Spanish occupation of California, started as a slapdash collection of adobe huts. Not that there's anything wrong with adobe . . . baked mud was the best building material people could find at the time.

In 1957, the people of San Jose used the same approach when they built their new city hall. They used the best building material they could find: curtain walls of porcelain-enamelled steel on a structural steel framework. The building is beautiful, and the price was low. Steel curtain walls are much lighter than conventional walls, so the building's foundation and structural frame are lighter—and less expensive. Construction time and labor costs were cut because steel curtain walls are *factory assembled*. They are delivered to the site as complete units that are ready to be bolted into place. Entire walls are erected in days instead of months.

Porcelain enamel on steel is a time-tested building material that practically eliminates maintenance. The steel panels are strong and rigid, and they're sealed against weather and moisture. They have a hard, glasslike surface that even rainfall will keep clean. These walls will still look bright and new decades from now.

Ask your architect about steel curtain walls. United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

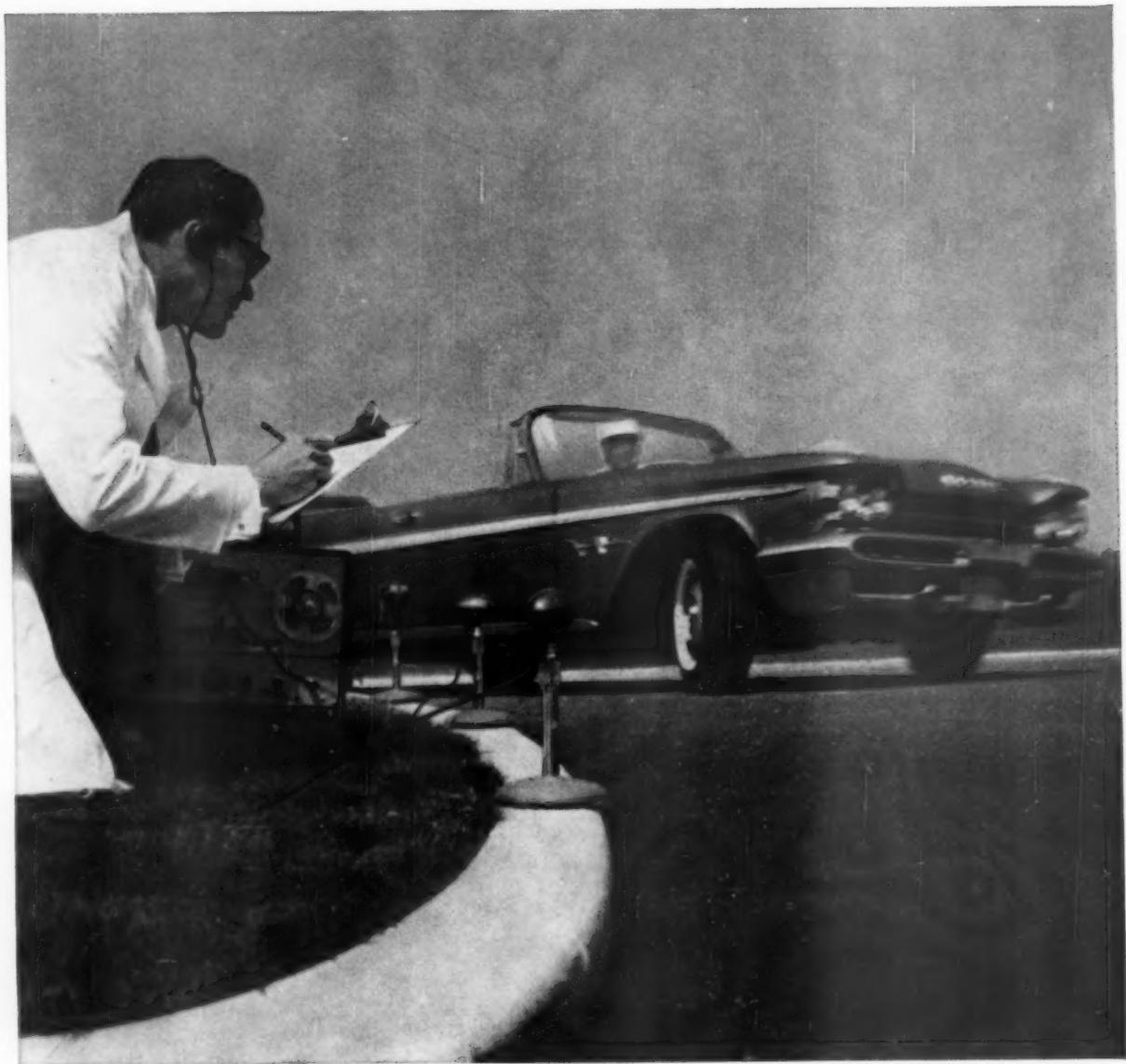
USS and Vitrenamel are registered trademarks

USS STEELS FOR ARCHITECTURAL DESIGN

USS Stainless Steel • USS Vitrenamel
USS Structural Steel • USS Window Sections



United States Steel



Revolutionary tire of Butyl Rubber hugs the road so well you can't make it screech.

BIGGEST TIRE NEWS IN 25 YEARS... TIRES OF BUTYL RUBBER

Of all the applications for which Butyl rubber has proved superior, the most recent and exciting is the all-Butyl tire. Thousands of car owners have found that these new tires bring added comfort, silence and greater safety to their driving.

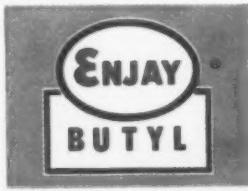
Enthusiastic Butyl tire buyers say: "... have much more stopping power on wet roads than any other tire I've used." "Give you a feeling you're riding on a

cloud." "... are absolutely quiet ... over bumpy dividers you don't feel a thing."

In these revolutionary new tires — as in hundreds of other products — Enjay Butyl outperforms natural and other types of rubber . . . on the road, in your home, in industry, too. The wide range of Butyl compounds gives new freedom to product designers in every industry. Let us show you how Butyl rubber can help make your product better.

The Enjay Company does not make tires. It supplies Butyl rubber to manufacturers of tires, tubes, and hundreds of other products.

EXCITING
NEW
PRODUCTS
THROUGH
PETRO-
CHEMISTRY



ENJAY COMPANY, INC., 15 West 51st St., New York 19, N. Y. Akron • Boston • Charlotte • Chicago • Detroit • Los Angeles • New Orleans • Tulsa

from now, propellants will have advanced far beyond the chemical fuels, and materials will be different. Earth satellite stations will have made it possible to run earth-to-station shuttle trips with one kind of rocket, and take a different type for interplanetary flight.

The third-generation rocket may bear no faintest resemblance to the Rocketdyne behemoth. But experts are risking no specific prediction on where the rocket art may be in 1975 or 1980.

Meanwhile, for the next two years, the U.S. will have to rest all its hopes of narrowing the great gap opened by the Russians on the single huge Rocketdyne booster.

• **Saturn's Cluster**—Other combinations of rockets will certainly be used for special research tasks in space. Thus Saturn's cluster of eight Rocketdyne H-1 engines, now being put together by the German rocket team at Redstone Arsenal, will have a combined thrust of nearly 1.5-million lb. The basic H-1 engine for the Saturn is a descendant of Thor and Atlas engines and has already howd up well on the test stand.

The Saturn system should be ready a year or so before the single F-1, but it will never be possible to extend its total thrust much beyond the 1.5-million-lb. limit.

• **Centaur's Fuel**—Centaur, another big combination rocket that may be available before the F-1, is a candidate for certain research chores in space. But Karel J. Bossart, technical director for Convair-Astronautics, admits that Centaur is running into some new problems. One of Centaur's fuel elements is liquid hydrogen which, at minus 423°F., is colder than any fuel ever used in a rocket engine. So it has been necessary to re-examine the structural properties of all materials used in the engine to see if they can stand such temperatures.

Another Centaur problem is thermal insulation. How can the fuel tanks be insulated from the combustion chamber so that the fuel will not be boiled away in the tanks?

• **Vega's Thrust**—Still a third type of rocket is Vega—a combination rocket based on a modified Atlas engine for first stage, a modified GE engine (originally designed for Vanguard) as a second stage, and a special third stage designed by Jet Propulsion Laboratories. Vega, like Saturn, will be ready in the early 1960's, but it will never reach the 1.5-million-lb. class. Vega will be useful for interim research, but will never compete with the loads that the giant Soviet boosters can carry.

That competition can come only from the Rocketdyne engine. And when Rocketdyne is ready depends not so much on technological advance as on the will on Congress, to be expressed early next January. **END**

EUCLID TWIN-POWER



Cuts Costs in Mines and Quarries

The use of two engines in earthmoving equipment, pioneered and developed by Euclid, has enabled mines, quarries, contractors and industrial operations to get a greater return on their equipment investment. With each engine driving a separate power train, bigger payloads are moved faster, with only one operator, and at lower cost per ton.

Euclid Rear-Dumps of 40 and 55 ton capacity are good examples of this advanced engineering. They are unequalled in workability . . . have a total of 500 or 672 h.p. for moving big loads on steep grades that are common in open pit mining and heavy construction work. Separate Torqmatic Drives for each of the tandem axles completely eliminate clutching . . . changes from one speed range to another are made under full power.

In other Euclid equipment, too . . . crawler tractors and scrapers . . . Twin-Power pays off in more work done at lower cost. If off-highway earthmoving equipment is used in your operations, a Euclid Twin-Power application may improve your profit picture. The dealer in your area will be glad to provide helpful facts and figures—without obligation, of course.



EUCLID

DIVISION OF GENERAL MOTORS

Cleveland 17, Ohio

Euclid (Great Britain) Ltd., Lanarkshire, Scotland

Big power and big capacity pay off in big production . . . Euclid TC-12 Crawler Tractor has 2 engines that deliver 425 net h.p. . . . "Twin" Scraper of 24 yd. struck capacity also has 2 engines (563 total h. p.) and all-wheel drive with separate Torqmatic Drives for each axle.



In Research

Potent New Antibiotics on the Way;

Doctor Urges Long, Careful Tests

Fresh fuel for the fight over the value vs. the danger of antibiotics was produced in Washington last week at the seventh National Symposium on Antibiotics. According to reports by American, British, Japanese, and Mexican researchers, a spate of new wonder drugs should be on the market soon. Among them:

Declomycin, a modified tetracycline, developed by Lederle Laboratories. Twice as active as older drugs of its class, this newcomer is said to be effective against numerous stubborn infections, such as undulant fever, virus pneumonia, and bacillary dysentery.

Colistin, the first antibiotic researched and developed by Warner-Lambert Pharmaceutical Co. In early tests, doctors report that this drug is particularly useful in dealing with bacteria that cause eye, ear, and urinary tract infections.

Fervenulin and **Streptozotocin**, which are now under study by Upjohn Co. In lab tests, Upjohn's researchers say, Fervenulin appears to be active against 23 types of bacteria and 16 different fungi; Streptozotocin, on animals at least, is effective against several germs considered totally resistant to the older antibiotics.

Humatin, an oral antibiotic under development by Parke, Davis & Co. This drug, under appraisal at Johns Hopkins School of Medicine, reportedly is more than 75% effective in treating certain bacteria-caused cases of infectious diarrhea in infants and children.

At the same time, new evidence is appearing that there may be great potential danger in pushing ahead in the release of any new antibiotic too fast. Raising the danger flag this time is Dr. Wiley H. Harrison of Chicago. He reports that in some cases an antibiotic called Dihydrostreptomycin (a variation of the original streptomycin) can cause deafness in patients. During the past five years, several warnings regarding this antibiotic have been issued, but it is still included in some commercially prepared combinations without a warning. "In practice," says Harrison, "doctors see case after case in which irreversible hearing loss has occurred due to the use of this drug, usually in combination with penicillin and streptomycin."

Until substantial tests have been made—over a period of years—it is not safe to assume that similar effects may not be characteristic of other antibiotics.

Esso Research Expands Its Facilities

Into a "Technical United Nations"

A 675-acre scientific center, described by company executives as a "technical United Nations" was opened last week by Esso Research & Engineering Co. The new facilities in northern New Jersey represent the big-

gest single expansion for Esso Research, and will house about 800 scientists, engineers, and technical personnel.

In opening day ceremonies, Marion W. Boyer, a director of Esso's parent company, Standard Oil Co. (New Jersey), marked the pace at which Esso Research has grown. In 1919, he recalled, the company existed only as a department, with a staff of 26. Today, Esso Research has more than 3,000 employees and is claimed to be the nation's largest oil research firm.

The importance of the operation to Jersey Standard is estimated at \$25-million annually. That's the amount by which the parent company figures its capital costs are reduced each year through new research and engineering technology developed at Esso.

Researchers Design Copper Crucible

For Induction Melting of Reactive Metals

Research scientists at Battelle Memorial Institute, Columbus, Ohio, believe they have found a way to make induction melting more practical for use in reactive metals. They have devised a water-cooled copper crucible for the job.

The Air Materiel Command is excited enough about the idea to issue a contract to Mallory-Sharon Corp., for whom Battelle did the research, to build a prototype crucible for further testing.

One of the biggest problems in melting reactive metal is preventing contamination by the heating elements. Little use is now made of induction melting for this very reason. Instead, the most common procedure is to melt the reactives down in a consumable electrode furnace with the electrodes made of some metal that will not upset the end product. In this way, the electrodes can be consumed in the reaction and contamination prevented. But this method, though widely used, is costly and has definite disadvantages in product flexibility and quality control.

On the other hand, until the Battelle work, induction melting with a metal crucible had not been considered suitable for use with reactive metals because of the technical difficulties involved. For one thing, when the metal crucible tended to become too hot some would melt off and contaminate the charge. In addition, electric power losses within the crucible seriously reduced melting rates.

To circumvent these problems, Battelle scientists have designed a copper crucible which is water cooled to keep it from contaminating the charge and is segmented to block off induction currents in the crucible, which waste power. The inventors boast that their crucible can accomplish the melt job quickly (within two minutes) and with reasonably small power input (80 kw.).

Although the Battelle process is in the early stages of development, researchers expect it may some day be most useful in the production of specialty steels.

Early tests indicate that it not only lends itself to continuous melting and casting of ingots, but that it can also be adapted for casting from the crucible itself. High-quality melting can be produced from a single melt because of the vigorous stirring action, characteristic of any induction melting process.

At Circleville IN SOUTH CENTRAL OHIO

BENEFIT-PACKED SITE WITH ADDED ATTRACTION

**Close source of polyester film
for packagers, fabricators,
converters or processors**

The Scippo site, on the outskirts of Circleville, Ohio, offers distinctly attractive advantages to prospective industry. Close by is the du Pont Mylar polyester film plant, and a few miles further, construction of new plant at Hopetown, Ohio is underway for Johns-Manville.

- Fifty-five acres, fairly level, approximately 3,000' frontage by 800' depth.
- Bounded on the east by U.S. 23, Ohio's most important four-lane north-south highway; on the west by the Newport News-to-Toledo double-track main line of the C&O.
- Fuel sources — high-grade bituminous coal, as well as high quality coke, is available in abundant supply from nearby fields in eastern Kentucky, and West Virginia.
- Water in abundant supply for industrial use, including two 18-inch wells formerly used by C&O and capable of a million-gallon daily yield. Access to Scioto River for effluent disposal.
- Labor — hundreds of skilled people experienced in the production of automotive hardware, plastics, transportation equipment, glass, leather goods, textiles, apparel, and processed foods. Located within easy travel range.

Consult C&O in confidence: Complete industrial surveys of this and many other sites are available to interested companies. Inquiries are handled in complete confidence and without obligation. Address: Wayne C. Fletcher, Director of Industrial Development, Chesapeake and Ohio Railway, Huntington, W. Va., Telephone: Jackson 3-8573.



Chesapeake and Ohio Railway

*Serving: Virginia • West Virginia • Kentucky • Ohio
Indiana • Michigan • Southern Ontario*



FIRST CONFERENCE of National Assn. of Business Economists spent much time discussing the changing role of company economist.



BETWEEN SESSIONS, NABE members go outside for some fresh air. The conference was held at Dietrich Hall (in background) of Wharton School in Philadelphia.

ECONOMISTS:

New Jobs for

What is—or should be—the role of the economist who works for a company?

That's the main question that members of a new professional body, the National Assn. of Business Economists, tackled last week at its first annual convention at the University of Pennsylvania's Wharton School of Finance & Commerce in Philadelphia.

And it's a question that's becoming increasingly important both to companies that have economists and wonder if they are using them properly and to companies that don't have economists and think that perhaps they should have them.

- **Diverse Duties**—The answers produced by the conference were pretty diverse. According to Arthur S. Rosenbaum, economist for Sears Roebuck, the role of the business economist varies



COCKTAIL BREAK provides those attending conference an opportunity to compare notes and discuss the wide variety of functions they perform for companies that employ them.

Jobs for Company Men

from "intimate of presidents" to something little more than statistical clerk. He may be a highly trained, mathematically gifted man capable of assuming a professorship in a first-rank university. He may be an ex-accountant or engineer who had had a new label pasted on him. Or he may be basically a public relations man who knows the terminology of economics and whose main job is writing the boss' speeches.

Yet despite the varying duties the business economist performs for different companies, the conference made one thing clear: His role is undergoing major changes; it is becoming broader, more complex, and more professional.

• **Less Emphasis on Forecasting**—A generation ago, the economist got his foot in the business door primarily as a company soothsayer. Business forecasting still is a major part of his function

in most companies (BW—Sep. 24 '55, p90).

But increasingly economists are saying that forecasting isn't the only job—or even the best job—they can do. Indeed, the mark of the elder statesman among business economists appears to be that he no longer has to bother with forecasting. A pioneer business forecaster in an earlier day, Wilson Wright of Procter & Gamble, declares: "I'm out of the forecasting business." He explains that he has lost confidence in "numbers placed off somewhere in the future."

Most of the economists at the Philadelphia conference thought Wright went too far. William Baumol, a theoretical economist at Princeton University who also does economic consulting for Alderson Associates, Inc., insists that forecasting is still a vital



JOEL DEAN, Columbia University and Joel Dean Associates, urged economists to do more work in antitrust field.



WILSON WRIGHT, Procter & Gamble, a pioneer business forecaster, now questions the value of playing with numbers.

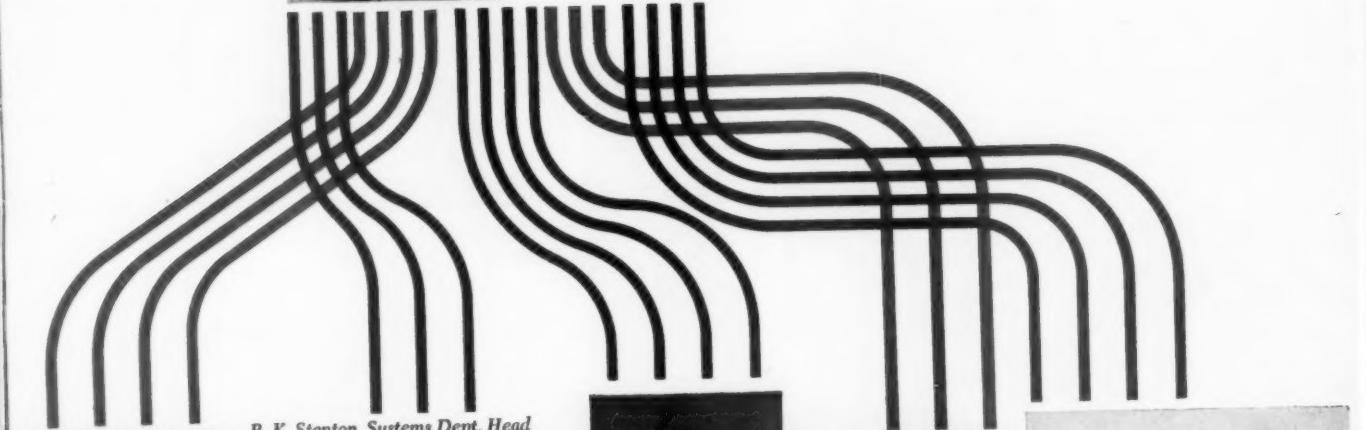


DAVID MELNICOFF, Fels & Co., declared that economists should seek to advise management on policy matters.



A Statement from Certified Grocers of California, Ltd:

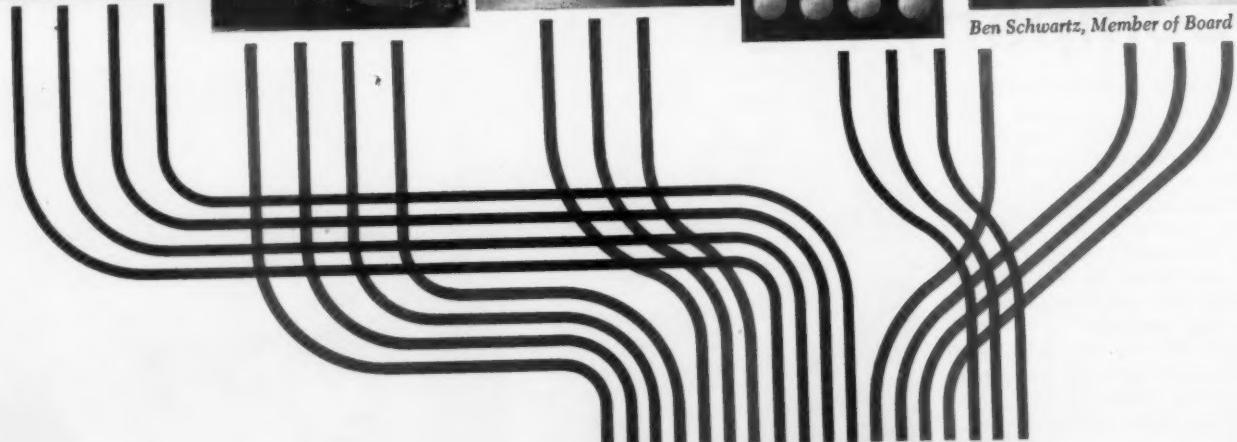
"We
do
Bu



R. K. Stanton, Systems Dept. Head



Ben Schwartz, Member of Board of Directors



"...a
store
HAND
During
more
million
food
12-m
Certified
grocer
amor

Ran

C
mer
grou
in o
was
the
pur
bers
and
in t
Cen

K
Cert
data
con
hou

H

"We are thousands of dollars ahead with our Burroughs 205 computers..."

"...and keep a tight inventory control for our 1450 member-stores right down to the last pack of cigarettes shipped."

RANDOLPH PRICE, Controller, Certified Grocers of California, Ltd.

During a recent 13-week period, Certified Grocers provided more than 700-million smokes, cured (or tried to) about 5-million headaches, dished up some 6-million cans of baby food and kept a welter of household pets happy with around 12-million cans of dog and cat food. Little wonder, because Certified is the world's largest retailer-owned wholesale grocery distributor, and its member-store sales rank fourth among all of the nation's retail food distribution systems.



Randolph Price, Controller and Nick Walsh, Data Processing Manager

Certified Grocers was founded in 1922 by 15 visionary men who met in a quiet Pasadena hotel room to develop a group buying plan. They decided to pool their buying power in order to compete with the big chains. Their first purchase was a carload of soap, which they unloaded themselves at the rail-head. Their plan was successful, and by 1929 they purchased their own warehouse. Today, Certified's members own and operate more than 1450 stores in the West, and approximately 35 percent of the foodstuffs purchased in the greater Los Angeles area comes off the shelves of Certified member-stores.

Keeping an accurate tab on all that merchandise is a chore. Certified has assigned to its two Burroughs 205 electronic data processing systems, purchased in 1956. One system controls the billing and inventory of a Los Angeles warehouse; the other handles the orders for goods shipped out of the San Fernando Valley warehouse and all non-food

orders. Between the two computing systems, they average some 200,000 items ordered daily. When frozen foods and delicatessen items are added to the computer program this month, the billing and stock control of over 18,000 different items will be automated.

"Reliable daily use is an extremely important factor in our application," reports Nick Walsh, Certified's Data Processing Manager, "because ours is a 7-day per week, 20-hour per day, up-to-the-minute operation. Orders come in as checked off in a catalog. The orders, converted to punched cards, are merged with our stock status file on magnetic tape and entered into the computer. Our 205's process the orders, update the magnetic tape file, and produce the punched cards from which invoices are prepared. The printed invoices are then used to select merchandise from the warehouse and for the preparation of accounts receivable." Walsh continues, "We have found our 205's give us fast and accurate inventory control and save us money in the billing of daily invoices...savings that are passed on to our members." "More than just smooth operating equipment is important in a data processing installation," adds Controller Randolph Price. "A manufacturer must provide the training, service and over-all support such as Burroughs has given us...this is essential to any successful EDP program."

Certified is also using its 205's as an extremely valuable tool for another purpose: the preparation of purchase analysis reports. The reports, subscribed to by about 600 markets, give each member a current, accurate picture of all his purchases. They help him to decide which items are selling well, which to discontinue, shelf space to reserve, and of course, guide him in purchasing. The value of the reports is expressed by one member, Mr. Ben Schwartz, Member of the Board of Directors and owner of Foods Co., who reports, "This is one of the finest services Certified offers. I receive as many as 8 or 9 different kinds of analysis reports over a period of time, at a cost which is negligible in comparison to their usefulness. These reports save me thousands of dollars!"

Controller Price points out, "These special reports, made possible by our 205 computers, would have been impracticable to prepare under our previous tub file and punched card system. Work that would have taken months now takes a few hours. The cost under our old system would have been three to five times as much and the reports wouldn't have been available soon enough to do our members any good."

The 205 systems are also being used for Certified's own complex purchasing operations. A periodic analysis keeps headquarters informed of the exact sales and distribution of thousands of items. Buyers are able to check out-of-stock situations quickly, determine the average inventory during the quarter, and accurately estimate average quarterly sales.

Just as Burroughs 205's are helping Certified's management take costly guesswork out of many daily business decisions, so are hundreds of Burroughs electronic data processing installations aiding other commercial and industrial users. Burroughs' complete line of computing systems is backed by a nationwide team of computer specialists. For additional information on how the 205 or other Burroughs electronic data processing equipment can help in your business, write ElectroData Division, Pasadena, California.



Burroughs Corporation

"NEW DIMENSIONS/in electronics and data processing systems"

... the economist must inform management what he can do and what he can't do . . .

(STORY on page 128)

function of the economist. But, says Baumol, he should play a larger part in advising on management decision-making. His background in marginal analysis, Baumol pointed out, makes him valuable in shooting for optimal profits.

• **Managerial Functions**—David C. Melnicoff of Fels & Co. also urged that economists de-emphasize forecasting and concentrate more of their time on managerial economics, suggesting alternative policies to management in such areas as marketing, budgeting, purchasing and raw materials, and plant location.

James D. Bowers, director of economic research at United Air Lines, indicated that in his company economists already were moving in this direction. It's part of their job to analyze the overall economy, spot the impact on demand for United's passenger and cargo services. They also advise management on when to sell old planes and when to purchase new ones, where to locate new facilities, and provide estimates on capital expenditures.

• **Broader Qualifications**—This type of economic operation represents the trend of the future, according to George L. Bach, dean of Carnegie Tech's School of Industrial Administration. He laid out these qualifications for the future business economist:

- He ought to be flexible and adaptable. His main asset to a company should be his ability to solve problems that pop up unexpectedly and for which there are no pat solutions.

- He must be thoroughly grounded in economic theory and able to apply his economic discipline to cost analysis, financial decisions, production problems. In addition, he needs a knowledge of statistics, accounting, business structure, and mathematics.

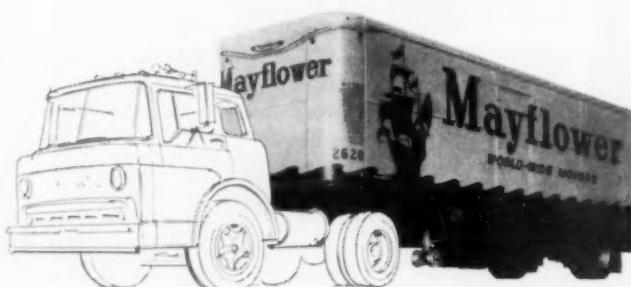
- He also should be able to give his boss a perspective on the social-political-economic environment in which the business functions, playing the role of trusted counselor.

But right now, few economists are ready to play the complex and diverse role that Bach envisions for them.

• **Basic Problems**—Before the business economist can do any economic advising, commented George Cline Smith, vice-president and economist for F. W. Dodge Corp., he first has to lick two major problems: (1) He must inform management what he is capable of doing and what he can't do, and (2) he must be able to communicate. Smith's

Another Trailmobile

... bears down on shipping costs!



Trailmobile believes that hauling costs go down when trailers are closely matched to the hauling need. For example, the moving van above meets a particular need because its design is the result of ideas and opinions supplied by hundreds of leading movers. ■ In the same way, the Trailmobile CID concept lets you design trailers to fit your shipments. ■ CID—which means Customer Individual Design—lets you determine the size, weight and individual features of your trailer by simply selecting from a wide array of interchangeable components the ones that best suit your needs. And when these are assembled you have the ideal trailer for your particular hauling conditions. ■ Let your Trailmobile representative show you how individually-designed Trailmobile trailers can cut your hauling costs.

TRAILMOBILE INC.

Cincinnati 9, Ohio • Berkeley 10, Calif. • Springfield, Mo. • Longview, Texas

TR-817



harnessing the energy of the stars

Frenchtown Porcelain plays a major role because it
mixed imagination with Alcoa Aluminas



Starting as a casting some 90[°] long, the finished ceramic reaction chamber for the C-Stellarator will be approximately 49[°] long with an OD of 19[°] and a 1[°] wall.

Hydrogen fusion, energy source of the stars, may become a source of low cost power for man. To that end, Project Matterhorn—sponsored by the AEC and administered by Princeton University—is building an experimental device called a C-Stellarator* to assemble data related to this goal. A key part of the Stellarator will be a ceramic reaction chamber made by Frenchtown Porcelain Company, Frenchtown, N.J. The Frenchtown ceramic body contains more than 95 per cent Alcoa® Alumina. Result: a ceramic able to deliver high resistance, not only to thermal shock, but to mechanical impact and vibration as well . . . able to contain hot gases with no loss of vacuum . . . able to insure low dielectric loss. Here, again, is ample proof that it pays to mix imagination and engineering with Alcoa Alumina . . . to make a new product possible or an old product better. Get the exciting details in our booklet *Ceramics, Unlimited Horizons*. Write to the ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-L Alcoa Building, Pittsburgh 19, Pennsylvania.

*Designed and fabricated by Allis-Chalmers Manufacturing Co. and Radio Corp. of America



Ceramics is a 7 billion dollar industry in the U.S. and affects every phase of modern living.

TOPS in STRENGTH



You'll find TM Alloy Chain is used wherever rugged "brute strength" is a requisite. For example—the working load limit of $\frac{3}{4}$ " TM Alloy is 23,000 pounds. It's tougher, safer and far less costly than other grades of chain tested. Assemble your own slings with TM Hammerlok links, or order to your specifications. See your distributor or write.

S. G. Taylor Chain Co., Inc.,
Hammond, Ind.



Everything Swings
on TM Slings

**Taylor
Made**
CHAIN SINCE 1873



COMMUNICATION still remains one of the first hurdles for the economist, says George Cline Smith, F. W. Dodge Corp.

contention that economists sorely needed training in effective writing and speaking was strongly seconded by others at the conference.

Smith split the economist's role into two broad categories:

- Within a company, he should bring his analytical tools to bear on management problems and suggest alternative policies where possible

- Externally, he should take advantage of any opportunity to give his company a public relations boost by giving talks or publishing his views.

- **Neglected Area**—One area in which the business economist can make a major contribution is the field of antitrust litigation, Joel Dean, of Columbia University and Joel Dean Associates, declared in the principal address of the Philadelphia conference. In this critical area, he said, the job of drafting, enforcing, adjudicating, and contesting the antitrust laws calls for "counselors-at-economics" as well as counselors-at-law.

The need for the economist in antitrust work, said Dean, is implicit in the purpose of antitrust legislation, which seeks to achieve economic goals through legal means.

Dean held that most businesses were taking too little preventive medicine for their antitrust ailments and that "a systematic, self-initiated program for prevention of antitrust litigation" is demanded today. In such a program, he said, the economist should set up and run an "antitrust audit."

- **Antitrust Audit**—This economic audit, according to Dean, should attempt to look at the company through the eyes of the enforcing government agencies in order to forecast its susceptibility to antitrust litigation. The audit would involve a study of the com-

Looking for business



...in Japan and throughout the Far East? Fuji—Japan's largest and friendliest bank—has the experience, facilities, and staff to help you find new outlets for your products or services. Write us for more information. Or, if convenient, come in for a chat. In New York City ... 42 Broadway.



THE FUJI BANK LTD.

Founded in 1880

Head Office: Chiyoda-ku, Tokyo
187 Branches throughout Japan
Overseas Offices: New York • London • Calcutta

essential...

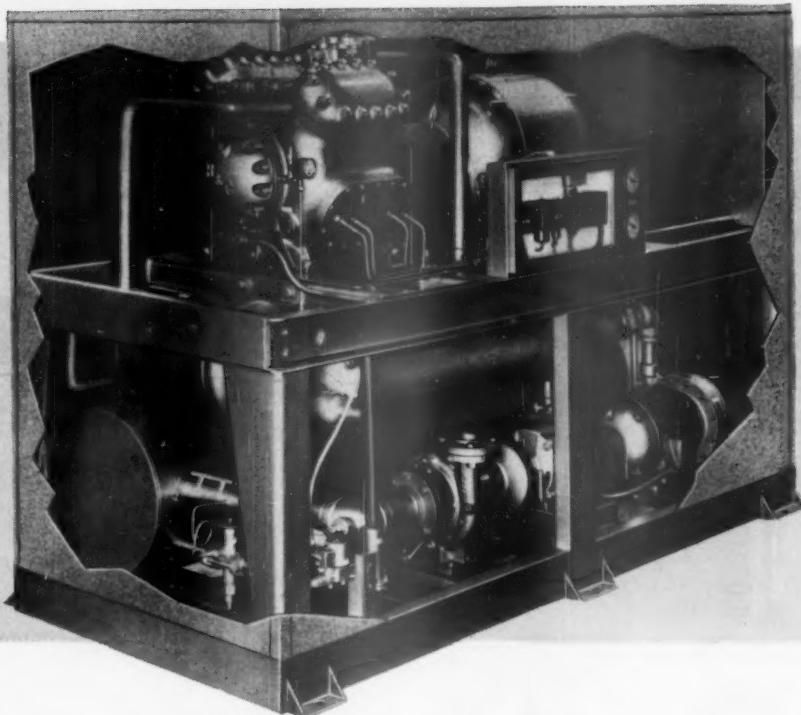
to chemical management, engineering, design, production, and research personnel is a thorough knowledge of the latest developments throughout the field...and the developing trends of tomorrow.

You'll find this vital information at the Exposition of Chemical Industries. Over 500 fact-filled displays showing new ways to cut costs, increase production and step up plant efficiency.

Plan now to attend—and bring your key associates.

**27th EXPOSITION OF
CHEMICAL INDUSTRIES**
N. Y. COLISEUM • NOV. 30-DEC. 4,

Management: International Exposition Co.
480 Lexington Ave., New York 17, N. Y.



**THE
ONLY ONE
OF ITS
KIND!**

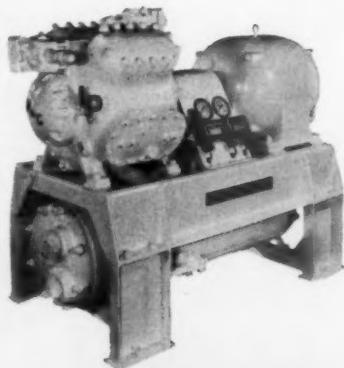
A "package" cooling unit with all major parts made and guaranteed by one manufacturer

Here is an entirely new conception of a "package" liquid cooler...with more features for efficient, trouble-free performance than seems possible to pack into one piece of equipment. Nothing to add—literally a plug-in unit!

Many special features are incorporated as standard equipment which in similar products are "extras," or not available at all. Particularly notable is the compressor, designed and built by B&G to operate with smooth efficiency.

The B&G Package Liquid Cooler—in capacities of $7\frac{1}{2}$ to 150 tons—can be specified for a wide variety of applications...either as a separate space cooling unit...or in combination with a forced hot water system...or for the numerous industrial processes requiring controlled cooling of materials.

This is a typical B&G product...built to the high standards which make the B&G label a warranty of satisfaction.



B&G CONDENSING UNIT

Another B&G matched unit, with many exclusive features engineered into amazing compactness. Unit includes quiet, vibrationless B&G Compressor. $7\frac{1}{2}$ to 150 tons.



**BELL & GOSSETT
C O M P A N Y**
Dept. FY-30, Morton Grove, Ill.

Other plants at
Chicago, Illinois • Midland Park, New Jersey
Longview, Texas • Gladstone, Michigan

Canadian Licensee: S.A. Armstrong, Ltd., Toronto 16, Ontario

A DIVERSIFIED LINE OF HIGHEST QUALITY PRODUCTS



Booster Pumps



Refrigeration Compressors



Marlow Pumps



Heat Exchangers



Centrifugal Pumps



Oil-less Air Compressors



"Broaching a 24-foot helicopter spar such as this has never been done before," says Mr. Crosby. "This is one of the latest developments we are currently advertising."

"BUSINESS PUBLICATION ADVERTISING OPENS OUR PROSPECTS' DOORS"



"Business publication advertising helps us in two ways," says Joseph P. Crosby, Vice President, Sales, The Lapointe Machine Tool Company. "First, it helps us to establish and maintain industry leadership. Second, advertising in leading business publications makes it possible for us to get a large volume of essential information to a wide audience of buying influences . . . quickly, repetitively, and efficiently. It is this information that opens prospects' doors for our sales engineers."

IF WHAT YOU MAKE OR SELL is bought by business or industry, you can "mechanize" your selling by concentrating your advertising in the one or more McGraw-Hill publications serving your key markets. More than a million key men pay to read these magazines. When your advertising contacts them, it gives your salesmen more time to make specific proposals and close sales.

McGraw-Hill



P U B L I C A T I O N S



McGRAW-HILL PUBLISHING COMPANY, INC.,
330 WEST 42nd STREET, NEW YORK 36, N. Y.

6 STEPS TO SUCCESSFUL SELLING

MAKE CONTACT

AROUSE
INTEREST

CREATE
PREFERENCE

MAKE A
PROPOSAL

CLOSE
THE
ORDER

KEEP
CUSTOMERS
SOLD

MORE ADVERTISING HERE MEANS

MORE SALES TIME HERE

next day delivery?



call

Delta Air Freight

Wherever you are in the U. S. A., you can count on next day delivery via Delta Air Freight, now bringing you

the big plus

Delta operates all-cargo flights and in addition carries freight on every passenger flight, including Jets. All-cargo flights to and from New York • Philadelphia Charlotte • Chicago Cincinnati • Atlanta New Orleans • Houston • Dallas Miami • Orlando • Tampa



GENERAL OFFICES: ATLANTA AIRPORT, ATLANTA, GA.

... the economist should be a key member of management's team in an antitrust case . . .

(STORY on page 128)

pany's share of the market, earnings, integration. It would require study of business rivals, possible substitution of products, entry into the industry, pricing and distribution practices.

A few companies are beginning to run audits like this, but Dean believes the practice should be more widespread and continuous. In the companies where the practice is in use, management is forced to consider whether there is serious danger of antitrust action and what actions might be taken to forestall it.

In addition to the continuous audit, Dean recommended that companies get into the habit of making special studies when some new course of action is contemplated that is "sensitive in the antitrust sense"—such as introduction of a new discount schedule or a merger with another company.

• **Defensive Job**—When the company actually is hit with an antitrust suit, the economist should be a key member of the company's defense team, Dean believes. His first job ought to be to forecast the government's economic case. "A firm's first reaction," says Dean, "often is that the government has no case—its charges are baseless and ridiculous and can be countered by a barrage of self-laudatory propaganda." But Dean thinks, at this point, the economist might restore a sense of reality—however chilling—by developing the arguments the government can make which are internally consistent and can be supported by factual evidence.

With a forecast of the government's case in hand, the economist can begin to sketch out the economic theory of the case for the defense, and go about the job of buttressing the company's case with the necessary economic studies. Dean cautions that when the economist begins to amass his economic evidence for the company, he had better bear in mind that the evidence is being prepared for a court—and that this may impose requirements more strict than those normal to managerial work or even academic research.

• **Skeptical Attitude**—That courts are not so predisposed to be trusting of the economist's evidence was brought out sharply in Judge Walter L. LaBuy's opinion in the du Pont-General Motors stock divestiture case. LaBuy subjected some of the economic expert witnesses to withering criticism. One economist, he said, drew his conclusions from sta-

coming to you for 1960!

The Best of Both

in calendar and specialty advertising



Exciting! New!
More Exclusive Features
... resulting from our recent merger.
When two firms, already highly rated in
their industry, join for wider representation
and better service, the customer benefits.
This year, more than ever, it will pay
you to see for yourself. Call or write.

SHAW-BARTON

AND THE GERLACH-BARKLOW COMPANY
Calendar and Specialty Advertising
SALES OFFICES IN PRINCIPAL CITIES
GENERAL OFFICES AND PLANT, COSHOCOTON, OHIO

100,000,000 PEOPLE KNOW THIS CONVENIENCE



Now...

no-Knot.
Coiled Cords
for all
APPLIANCES

Your appliances will have more sales appeal with no-Knot Coiled Cords. Mr. Manufacturer. No-Knot Cords are safer, neater, self-storing. Proved in principle on 100 million phones. No need to redesign your product... add no-Knot Appliance Coiled Cords anytime!

Now available in HPN, Type SP and Types SV, SJ... covering full appliance range.



Save up to 25% on elevator costs



Rotary Oildraulic® is the most practical elevator for rises up to 60 feet

Let the money-saving magic of hydraulics power the elevators in your new or remodeled building. The modern Rotary Oildraulic Elevator for rises to 60 feet brings you a new high in dependability, quality and economy. Here's how:

Economy—Oildraulic Elevators are pushed up from below by a powerful hydraulic plunger . . . not pulled from above. With no overhead machinery, there's no need for an expensive, unsightly elevator penthouse or heavy load-bearing shaft sidewalls. You save on construction costs.

Dependability—The hydraulic operating mechanism is extremely simple and dependable. All adjustments are made on one easily accessible control unit. Maintenance is minimized.

Quality—Velvet-smooth Oildraulic Elevators are available to your specifications with any type of control system. Operation may be with or without attendant. Freight or passenger types, 1000 to 100,000 lbs. capacities.

Over 100,000 Rotary Oildraulic Elevators and Lifts, installed

and serviced by a national distributor organization, are now in use. Mail coupon for more information or look for "Rotary Oildraulic" under "Elevators" in your phone book.

ROTARY LIFT COMPANY
Division of the Dover Corporation
Memphis, Tenn.—Chatham, Ontario



■ The award-winning Northwestern Mutual Insurance Building, Los Angeles, designed by Architect Richard J. Neutra, is one of the many beautiful contemporary structures using Rotary Oildraulic Elevators.



Oildraulic® Elevators

PASSENGER AND FREIGHT

Mail for helpful
information ►



Rotary Lift Co.
1019 Kentucky, Memphis 2, Tenn.

Send information on passenger freight elevators to:

Name _____

Address _____

How's your Comfort Index* this month?



Jack Lightfoot, LOCKHEED staff engineer working on the Polaris Missile for the Navy, explains why the COMFORT INDEX in Santa Clara County means better living to him. "It doesn't matter whether it's January or July around here—I can take off for the golf course any week end. And, frankly, I feel that I accomplish more on the job in this all-year mild climate."

Both management and employees have a lot to gain from the mild Santa Clara County climate. Productivity goes up as your COMFORT INDEX approaches the ideal level. But you get *more* than exceptional livability. This unique location at the Southern tip of San Francisco Bay places Santa Clara County right in the *market and transportation center of the West*.

First, compare the COMFORT INDEX of each potential industrial site. When you add the other advantages, every fact points to SANTA CLARA COUNTY—for maximum *livability and productivity*.

*COMFORT INDEX—One of many terms used to describe the exact point at which the climate of a particular area approaches an ideal combination of moderate temperature, low humidity.



SEND TODAY for these two booklets and bring your plant site research file up to date: "What Do You Mean—COMFORT INDEX?" and "NEW INDUSTRY SPEAKS".

**GREATER SAN JOSE
CHAMBER OF COMMERCE**
Dept. 7, San Jose 13, California

SANTA CLARA COUNTY California



FORECASTING is a vital—but not the only—function of economists, William Baumol, Alderson Associates, believes.

tical tables that were drawn "in a loose manner" and "his demeanor on the stand and his inability to give specific answers . . . left the court with the conclusion that little or no reliance could be placed on his expert opinion." In the case of another economist, LaBuy said "his opinions . . . were completely unsupported by any evidence that he had studied the issues before the court."

Dean's conclusion, after such experiences, is to be "generally skeptical about the value of expert testimony by professional economists, especially in Federal Trade Commission cases." By and large, he finds, company executives who are prepared to understand the broad economic issues in the case can present the same economic facts and arguments an economist would—and present them more effectively.

• The Reaction—Dean's paper impressed many of the business economists in Philadelphia as important in mapping out a major area in which more of them ought to get involved. But there was dissent on some of the points Dean made.

Some of the economists felt, for example, that it was safer to rely on the outside economic consultant than for company economics departments to try to plunge into antitrust research and counseling.

A few doubted the wisdom of running preventive audits. One man—whose company is involved in heavy antitrust action—hates to think of the damage a company might suffer if the critical documents produced by the company's own economists should fall into the hands of the antitrust lawyers. This same man also believes an experienced economist within the industry, who knows the company and industry thoroughly, may be just as effective as his boss or the lawyers as a witness. END

How
Pittsburgh Coke
Serves
America's Basic
Industries



Your bath, Madam, courtesy of the Foundry Industry

FROM the moment you step into your bath in the morning till you drive home in the evening, your life is made better and easier by gray iron castings—products of America's great Foundry Industry.

What kind of things are made from gray iron castings? The list is almost endless. But you can begin with *bath tubs, auto engines, door hinges and rolling mills*. And then go on for another hundred thousand or so products.

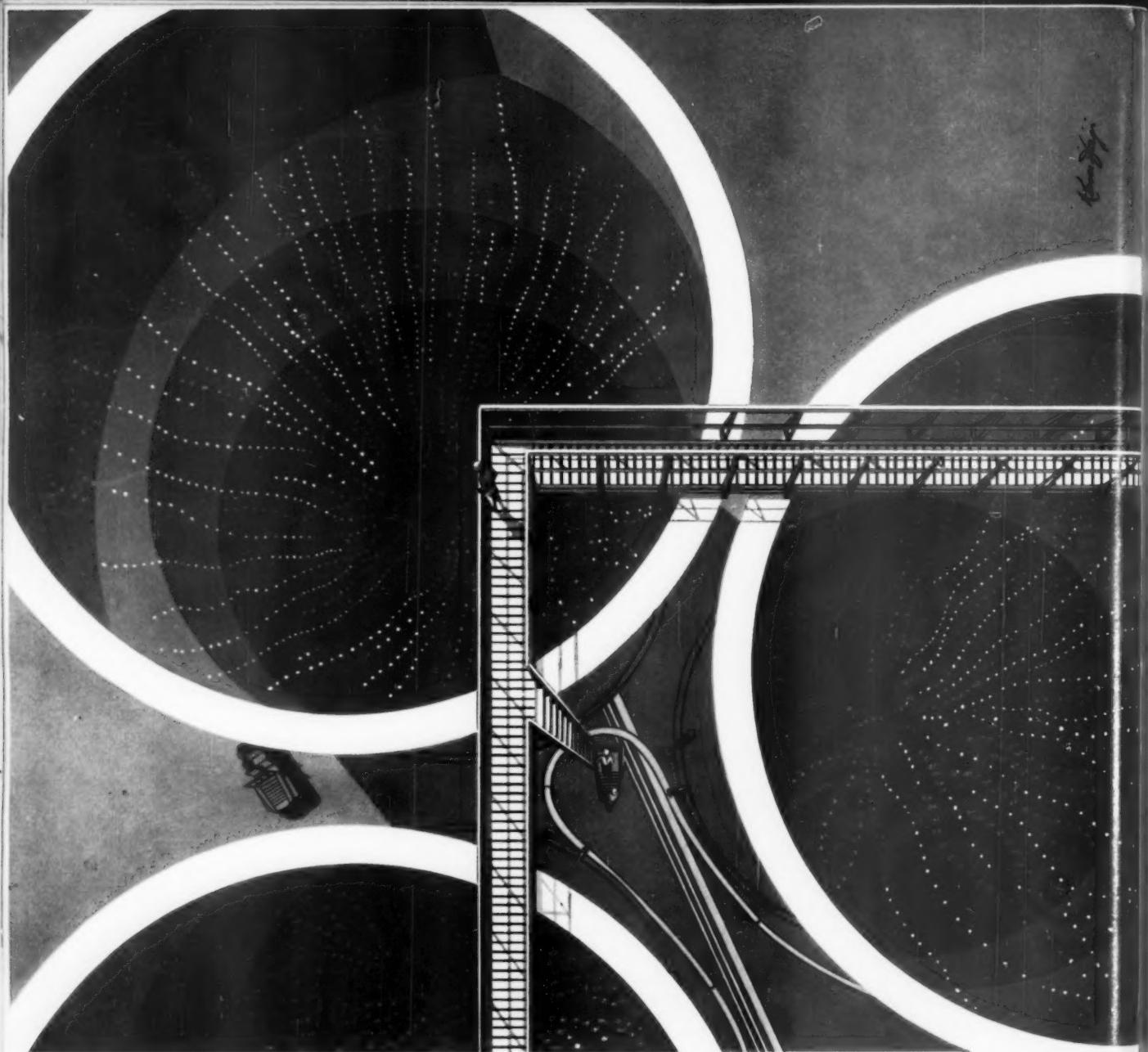
During the past quarter century, metallurgists have so improved the strength, machinability and general quality of gray iron that it is now recognized as a prime construction and engineering material.

The Coke & Iron Division of Pittsburgh Coke & Chemical supplies many of the nation's leading foundries with pig iron and coke—the two key materials of gray iron production. Produced in the heart of America's gray iron manufacturing area, Neville Pig Iron and Neville Foundry Coke are recognized for their unexcelled quality.

Pittsburgh Coke is equally well known as a dependable supplier of high purity coal chemicals, activated carbons, protective coatings, ferromanganese, cement and cement products. If you use any of these materials, it will pay you to call Pittsburgh Coke . . . a basic and integrated producer.



PIG IRON • COKE • FERROMANGANESE • CEMENT • COAL CHEMICALS • PROTECTIVE COATINGS • PLASTICIZERS • ACTIVATED CARBON



Morton uses 100,000-gallon tanks in the chemical processing of high quality brine before converting it to high purity evaporated salt.

Only Morton offers salt service to industry everywhere in America

Morton, the only nation-wide salt company, has salt sources, sales offices and warehouses from coast to coast. This means Morton can offer you complete salt service whether you have just one plant or several plants in different states.

To tailor-make salt for the many special needs of industry, Morton starts with high purity salt from one of its sources. With the aid of gigantic processing, refining and screening equipment, plus constant quality checks, Morton can produce and package salt to meet exacting specifications for any user—from mammoth canneries to small cheese companies.

Morton produces nearly 100 different grades of salt for industry. Morton delivers salt by boat, barge, truck and rail. This means you can get fast delivery on a bag to thousands of tons, anywhere in the country.

Morton sales representatives are backed by the services of their own ultra-modern salt research laboratory—the most complete laboratory of its kind in the world. This means you can get complete technical assistance on any problem relating to salt. This service help alone may be worth thousands of dollars to you every year.

▲ Salt Sources ▲ Warehouses ▲ Sales Offices



**MORTON SALT
COMPANY**
INDUSTRIAL DIVISION



110 N. Wacker Drive, Chicago 6, Illinois, Telephone FI 6-1300

INTERNATIONAL OUTLOOK

BUSINESS WEEK
NOV. 14, 1959



Much to Washington's dismay, Gen. de Gaulle is dictating the arrangements for an East-West summit meeting.

This week, de Gaulle announced that Soviet Premier Khrushchev would visit Paris during the second half of March. After that, the French President plans a second Western summit as a followup to his Dec. 19 meeting with Pres. Eisenhower, Prime Minister Macmillan, and Chancellor Adenauer. That would put off the East-West summit till late April or even May—whereas Eisenhower had originally hoped for December, then reluctantly agreed to March.

At midweek, top U.S. officials were almost stupefied by the way de Gaulle has put himself in the driver's seat. They apparently have no idea of how to get him out.

It isn't de Gaulle's present ideas on East-West issues that bother Washington. These aren't too far out of line at the moment with American and British thinking. What's upsetting is the General's insistence on having his own way, regardless of what suits Eisenhower or Macmillan.

Beyond that, there's the fact that de Gaulle increasingly thinks of himself as the spokesman for the new six-nation European Community, especially for the Franco-German alliance. He even seems to conceive of the European Community as a potential "third force"—loosely allied to the U.S. and Britain rather than tightly integrated under the present NATO setup.

Of course, de Gaulle expects his summit stalling to give him more time to deal with Algeria and with internal political tension. He undoubtedly counts on the Khrushchev visit to cut much of the ground out from under the French Communist party, just as the Franco-Soviet pact of 1945 did. (It was de Gaulle who arranged this.)

The French Communists will find it hard to oppose de Gaulle as long as he is on good terms with Khrushchev. Taking its cue from the Soviet Premier, the party already has switched its line on Algeria. It no longer opposes de Gaulle's solution for that problem.

By agreeing to a March date for his visit, Khrushchev has shown that he doesn't mind delaying the East-West summit. This may seem strange after his earlier impatience for such a Big Four session. But by giving de Gaulle his own way, Khrushchev probably figures he is helping promote strains in the West—the kind of strains that ultimately might undermine NATO. Meanwhile, he won't hurt his bargaining position at the summit.

—●—

It's time to write off the joint U.S.-Euratom program to build 1-million kw. of nuclear power in the European Community by 1963-65. For one thing, European utility companies aren't ready to build the five or six nuclear stations that Euratom had planned on. For another, the U.S. is having second thoughts about the program.

The changed energy picture in Europe largely explains the difficulties—the slower rate of climb in European energy consumption, plus the coal-oil glut across the Atlantic (BW—Nov. 7'59, p128). There's also the fact that steam power plants can now produce electricity in Europe for less than was expected two years ago, while estimated costs of nuclear

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
NOV. 14, 1959

power have been rising. At the moment, Euratom can't count on more than three solid proposals—one each in Italy, West Germany, and France.

Washington is not too happy with the way the joint program has been going. Neither are the U.S. producers of nuclear power equipment. In addition to the slowdown, there's the fact that Euratom wants to have its nuclear power equipment built in Europe rather than in the U.S.

The original U.S. idea was to use Western Europe as a proving ground for U.S. equipment. That's why our industry went along with the program. Also, it largely explains why the Export-Import Bank extended Euratom a \$135-million credit. Given Western Europe's strong financial position today and our own payments deficit, it doesn't make much sense for Ex-Im to finance a program that depends largely on European equipment.

—•—

The India-China frontier conflict has seriously shaken Prime Minister Nehru's political position. Indian public opinion is clamoring for a stronger stand against Peking. And rightwing forces in India, long critical of Nehru's leadership, are combining to push him out of office.

Premier Chou En-Lai's proposal for a troop withdrawal on both sides, leaving China in possession of 6,000 sq. mi. of Kashmir, seems to appeal to Nehru. But if he agrees to this, it might bring his downfall.

—•—

U.S. troubles in Panama may get worse. There's a growing suspicion in Washington that Cuba's Fidel Castro (page 45) is involved in arousing anti-U.S. feelings over the canal. If so, U.S. officials fear that Panama will remain a powder keg at least until the general elections of May, 1960.

Until the recent riots in Panama, the State Dept. had been considering "concessions" in the Canal Zone—such as giving Panamanians rights to buy at U.S. commissaries and to hold jobs in the Zone. But these concessions have been shelved.

—•—

Note these developments in international business:

- **Litton Industries, Inc., makers of Monroe office machines, is expanding its operations abroad**—primarily to get products to sell in the U.S. market. Litton has just acquired majority control of Svenska Data-register AB, of Sweden, producer of the Sweda cash register. Some 40% of Svenska's output of Swedas is coming into the U.S. market now. Under the new arrangement, this will be pushed up to 75% in three to five years. Litton already has a manufacturing plant in the Netherlands, which ships products to the U.S. In addition, the company imports German-built adding machines.

- **A West German auto manufacturer moved into position this week to challenge British Motor Corp. as the largest automobile maker outside the U.S.** Daimler-Benz, makers of the Mercedes, revealed plans to take over effective working control of Bayerische Motorwerke (BMW) in Munich. (BMW stockholders will vote on the proposition early in December.)

Daimler already owns 87% of Auto Union, a producer of small cars. If the new deal is approved, the Daimler group will be able to show sales of around \$750-million for 1959. That compares with \$770-million for British Motor Corp. in 1958.

RCA'S FIRST NAME IS "RADIO"



The Service Man Looks at RCA 2-Way Radio and Sees More Trucks on the Road

It only takes a quick look to see radio's advantages in keeping rolling stock on the job. When the service man looks at 2-way radio he sees himself seated in the midst of his trucks on the highway! He's "close" enough at all times to give immediate attention to breakdowns, to save time of drivers in phoning for road service, providing new efficiency in keeping the maximum number of trucks on the road.

You can cut your truck maintenance costs and servicing time with 2-way radio, especially if you standardize on low-maintenance, high-dependability equipment from

RCA. This quality equipment is backed by the leader in radio and electronics, built for day-in day-out performance. Advanced engineering means greatest satisfaction, quality features. Expert service by RCA's own service technicians assures peak operation.

NEW FCC REGULATIONS MAKE 2-WAY RADIO PRACTICAL FOR VIRTUALLY EVERY BUSINESS ORGANIZATION. Find out how RCA 2-Way Radio can serve you best in the new frequencies made available through the Business Radio Service. Mail coupon below for complete information.

ANOTHER WAY
RCA SERVES BUSINESS
THROUGH ELECTRONICS



RADIO CORPORATION of AMERICA COMMUNICATIONS DIVISION • CAMDEN, N. J.

Everybody's using 2-Way Radio!

Accountants, airports, ambulance and coach services, bakers, banks, beer distributors, bottlers, building services, buses, butchers, cattlemen, cemetaries, concrete suppliers, detective agencies, distributors, farm equipment servicing, food processors, fuel delivery, industrial plants, landscape gardening, laundries, lumber yards, motoring clubs, physicians, realtors, refineries, repair services, refrigeration, service men, road builders, taxicabs, trucking, utilities, vendors, veterinarians, warehouses.

RADIO CORPORATION OF AMERICA
Communications Division, Dept. AC-26, Building 13-1, Camden, N.J.

Please send me FREE literature on RCA 2-Way Radio and its applications in my business.

Have RCA Communications Specialist call to explain how we can get on the air.

NAME _____ TITLE _____

COMPANY _____

TYPE OF BUSINESS _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Chemagination with DUREZ PLASTICS



TOUGH BUBBLE THAT EVEN A WILLIWAW CAN'T BURST

Photo courtesy—International Telephone and Telegraph Corporation

Take a 150-mile-an-hour wind. Freeze it to 50 below zero. That's a williwaw.

Now raise a structure four stories high and 55 feet across. A structure to house delicate radar equipment. A structure that's *cardboard-thin* — but *doesn't waver even when a williwaw hits it*.

Do this, and you'll get an inkling of the punishment that Hetron® plastic takes in DEW-Line radar domes like the one above.

Strength isn't the only reason why Hetron was chosen for these big domes. This Durez plastic has an inherent ability to discourage fire. It can't contribute to a blaze, or cause one to spread. That's important when you're

1,000 miles from the nearest fireplug.

This unique strength-safety combination is the reason behind Hetron's wide use by government and industry — in light-diffusing windows for factories and schools; in corrosion-resistant tanks, blowers and ducts; in fire-safe luggage pods for transoceanic jet airliners; in Coast Guard lifeboats, Navy landing craft, sport cruisers, industrial utility boats.

Hetron is just one of many plastics

from Durez—plastics known the world over for their ability to solve tough problems.

If you'd like a descriptive folder on Hetron, just write us. If you're currently having problems with thermosetting plastics, we'd appreciate the chance to give you our personal attention. Address DUREZ PLASTICS DIVISION, Hooker Chemical Corporation, 4011 Walck Road, North Tonawanda, New York.

HOOKER CHEMICAL CORPORATION

NIAGARA FALLS, NEW YORK

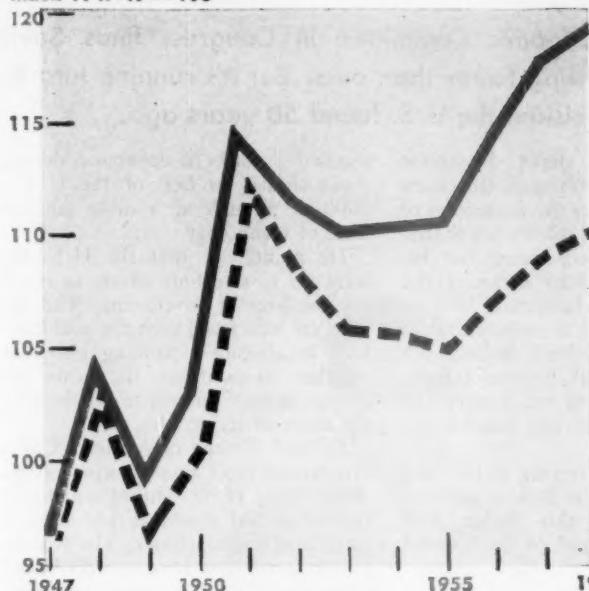
HOOKER
CHEMICALS
PLASTICS

Sales Offices: CHICAGO • DETROIT • KENTON, O. • LOS ANGELES • NEW YORK • NIAGARA FALLS • PHILADELPHIA • TACOMA • NORTH TONAWANDA, N.Y. • WORCESTER, MASS.

In Canada: HOOKER CHEMICALS LIMITED, NORTH VANCOUVER, B.C.

GOVERNMENT

Index 1947-49 = 100



Data: Joint Economic Committee, Study Paper No. 2.

Here is
How
Wholesale
Prices
Actually
Moved

Here is
How They
Would Have
Moved if
Steel
Prices Had
Risen No
More Than
Average

©BUSINESS WEEK

Pinning Inflation on Steel

Does the yawning gap shown in the chart (above) accurately measure steel's contribution to postwar inflation?

Yes, say economists Otto Eckstein and Gary Fromm, whose study of steel's role in the inflation process was published last week as study paper No. 2 by the Congressional Joint Economic Committee in its current probe into problems of inflation and growth. The widening spread between the two lines in the chart, Eckstein and Fromm claim, shows that the "extraordinary" behavior of steel prices accounts for 40% of the rise in the wholesale price index since 1947—and 52% of the increase since 1953.

No, say economists for the steelworkers and the steel companies. And so the brickbats began to fly from both sides in the steel dispute this week at a report that made inflationary villains out of both parties.

"This is a real shoddy job," exploded research director Otis Brubaker of the United Steelworkers.

"An incredible piece of business," declared Jules Backman, a New York University professor who has done economic studies for U.S. Steel Corp.

• **Heat and Light**—Thus, it appeared that a series of Joint Economic Committee studies designed to throw light on the inflation problem might generate plenty of heat as well. But not all of the studies offered such a direct invitation to battle. Another study paper on machinery prices by Thomas A. Wilson of the committee staff, pub-

lished together with the Eckstein-Fromm study, attracted little comment. Stepping on nobody's toes, this study concluded that the 19% rise in machinery prices between 1954 and 1957 was mainly caused by demand pressure.

Study papers No. 4 and 5, released this week, focused the committee's attention on still another inflation problem: the growing cost of services. One study by Washington University's Prof. Werner Z. Hirsch predicted continued increases in the costs of education through 1965. A report on medical care by Markley Roberts of American University forecast higher and higher medical costs as demand grows with increasing population and income, while the supply of medical services lags further and further behind.

• **Measuring Steel's Impact**—The steel study by Eckstein, the Joint Committee's technical director on the inflation study, and Fromm, a Harvard graduate student, drew the spotlight for two reasons: It appeared at the height of the steel controversy, and it attempted to arrive at precise estimates of steel's inflationary impact. It also marked the first time that input-output analysis—an econometric technique developed by Harvard's Prof. Wassily Leontief—had been used in a public document on inflation problems.

Eckstein and Fromm used input-output data on the diffusion of steel throughout the economy to arrive at a set of weights to measure steel's im-

pact on prices. By weighting the wholesale price index on the basis of this data, they calculated how prices would have behaved if steel had risen no more than the rest of the index.

They concluded that if steel had risen no more than the average of other things, wholesale prices now would be below the 1951 Korean War peak. If finished goods prices alone are considered—in order to eliminate double counting resulting from steel's presence at successive stages of production—the results show that steel still accounted for 38% of the upswing in wholesale prices since 1953.

• **Blame All Around**—But how could steel prices rise so much faster than other prices? Because union and management in steel constitute a bilateral monopoly, say Eckstein and Fromm. Steel prices rose faster because the union could extract from steel management "extraordinary" wage hikes exceeding productivity gains. The steel companies, in turn, possessed enough market power to pass on their higher wage costs to the public through price increases—with a little extra tacked on for fatter profit margins.

This process was probably speeded, the two economists add, by frequent government intervention in steel bargaining which resulted in higher wage settlements than would have occurred otherwise.

The rise in steel prices, the authors conclude, played a critical role in pushing up industrial goods prices higher. They argue that this peculiar type of inflation could not have been controlled by policies—such as tight money—aimed at holding back total demand.

• **Potshots**—The Eckstein-Fromm criticism of the government's role in past steel disputes gave some comfort this week to Labor Secy. Mitchell, who cited the report as supporting the Administration's non-intervention policy in the current steel bargaining.

But with the labor-management negotiation still deadlocked, both the timing and the findings of the study drew hot criticism—especially from the labor side.

"This is a report by a professor who knows not a thing about the industry and has pulled together all his prejudices about the industry, the government, and the union," said the United Steelworkers' Brubaker. "I honestly don't think it's either a fair or an adequate or a sound study."

A top AFL-CIO economist labeled as "utterly fantastic" the finding that steel accounted for 40% of postwar inflation. He contended that the rise in service prices was a big factor in inflation.

On the management side, NYU's Backman centered his fire on the basic premise adopted in the input-output study. "The whole approach assumes

that costs alone determine price," he said. "It's an utterly incredible theory of price making." He pointed out that consumer durables—the goods that contain the most steel and should show the biggest upswing according to Eckstein's theory—had shown the smallest rise in the cost-of-living index.

Other economists were less critical. One Administration expert on the steel industry expressed the view that Eckstein and Fromm had made an honest try to get at the facts. But he added that even though the Eckstein-Fromm study shows steel prices going up with wages, this cannot prove a cause and effect relationship.

Despite the critical reception from partisans in the steel dispute, Eckstein stuck to his guns this week. "You cannot face up to the inflation issue without facing up to the issues brought out in this study," he asserted. "Both American business and labor are getting a black eye from the peculiar processes by which prices and wages have risen in this industry."

• **Machinery Prices**—While the Eckstein-Fromm study supported a cost-push theory of price inflation in steel, Wilson's report indicated that excess demand pulled up machinery prices during the recent period of "creeping inflation." His study shows that prices rose because of a sudden jump in equipment orders during the 1955-57 capital spending boom. But rising wages and material costs—especially higher steel prices—get the blame for failure of machinery prices to fall back during slack periods.

Wilson suggests policies aimed at stabilizing investment demand in order to hold down price increases in machinery. Failure to check the rise in costs of capital equipment, he warns, could hinder economic growth by eroding the purchasing power of personal savings.

• **Schools and Doctors**—The Hirsch study on the costs of public education foresees no respite from rising school costs, which are expected to mount to \$17.4-billion by 1965. If current trends in taxation continue, there would be a gap of \$2.1-billion to be met by further increases in local taxes or by shifting more of the financial burden to the states or the federal government.

Medical costs will grow faster, according to the Roberts study. Spending for medical care has more than doubled since 1950, and now totals about \$25-billion a year, or roughly 5% of gross national product. With demand for medical services continuing to grow because of expanding population and higher living standards, Roberts forecasts a growing shortage of doctors, dentists, hospitals, and other suppliers of medical services. The imbalance between demand and supply is expected to bring further boosts in prices of medical services.

Russia Faces Growth Dilemma

Joint Economic Committee in Congress finds Soviet economy is growing faster than ours. But it's running into the same crucial decisions the U.S. faced 50 years ago.

A Congressional Joint Economic Committee report published this week exhaustively compares the economies of the Soviet Union and the United States. It finds Soviet growth strong but beginning to be faced by many of the problems we already have met.

The report, by a subcommittee headed by Rep. Richard Bolling (D-Mo.), includes papers by four experts. It is the third of a series. Earlier volumes had estimates by panelists in special areas.

Volume Three is serving as the base for hearings before the Bolling subcommittee that began this Friday with Allen W. Dulles, head of the Central Intelligence Agency, as first witness. Thirty-five other experts are to be called.

• **Soviet Buildup**—The conclusions of this week's report:

- The Russian economy is even stronger than had been generally recognized. But it is faced with enormous problems, some of which will become critical in the years ahead.

- The Russians have reached a fundamental turning-point in their economic development. They are now running into the difficulties of reorganizing and directing a complex economic machine—problems very like those with which the U.S. has had to deal for years.

- Soviet growth could continue to increase faster than that of the U.S. during the next decade, but the gains will probably be coming harder from now on.

- **6% Annually**—Gerhard Colm of the National Planning Assn. already detects some slowing down in the growth rate. He foresees a 6% expansion rate during the next decade, which would give the Russians a gross national product about half that of the U.S.

Other experts point out, however, that the Soviet economy with a GNP about two-fifths that of the U.S. has shown itself able, by concentrating on military ends, to match and even surpass U.S. defense efforts in some respects.

Harry Schwartz, Russian specialist for the New York Times, asserts that at present growth estimates, Soviet heavy industry would be outproducing U.S. heavy industry by 1970, even though the U.S. would still be higher in total GNP.

- **Point of Decision**—W. W. Rostow of the Massachusetts Institute of Technology figures that the Russians have

reached a stage of economic development similar to that of the U.S. in 1900-10, though at a more advanced level of technology.

He points out that the U.S. then went on to direct its efforts to enriching the lives of its citizens. The Russians are now faced with the problem of how to allocate expanding resources—whether to continue the same pace toward military ends or to lift the living standards of its peoples.

Willard Thorpe of Amherst College says Russia can't keep pouring progressively more of its output indefinitely into steel and machines just to make more steel and machines. The Russians probably will now have to start branching out into other areas, specifically consumption goods and services, where productivity rates are less. This will undoubtedly slow the Russian growth rate to some extent.

- **Limiting Factors**—Thorpe also lists other factors, brought out in the subcommittee studies, that are working against a higher Soviet growth pace:

- A growing labor shortage brought about by the reduction in number of young workers entering the labor force—a reflection of the birth deficit during the war years. A potential source of labor is the farm population, which accounts for 50% of total Soviet population. But to bring farm workers to industrial centers would require an enormous expansion of housing, which would in turn detract from efforts in heavy industry.

- The sighting of limits for agricultural expansion—along with previous increases in the labor force, the big spur to Soviet growth. Now the arable land is running out, practically all of it having been plowed in recent years.

- Lack of evidence of Soviet innovation in technology. Aside from the demonstration of the Sputniks, the Russians have borrowed their techniques from the West. Since they have now caught up technologically, future gains aren't likely to be so dramatic.

- **Challenge**—Jay Lovestone, director of international publications of AFL-CIO, expanded earlier comments on the Soviet system that were contained in Volume II.

"The well-being of the American people urgently requires that our nation step up the rate of its economic growth," Lovestone said. "The Soviet threat only makes American economic expansion still more urgent." END



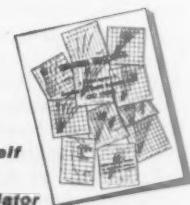
Take your own company...and prove how many extra \$1000 of profit you can make!

We're not talking about pennies here. Electric industrial trucks can save you enough to make a big difference in your profit. And right now Exide has a plan which can show you in fairly precise dollars just how much extra profit you can earn...this year and the years ahead.

The Exide representative will come into your plant and survey your actual truck operating requirements. Using your own figures, he

will show you just exactly where and how electric industrial trucks can save you money.

And they will save you money...through lower annual depreciation, lower operating cost, less upkeep, less downtime. Average savings are \$1000 per truck per year. This has been proved in hundreds of cases. And there are operating advantages besides: no fumes, easier driving, cleaner floors, and higher productive speed.



Free
do-it-
yourself
cost
calculator

Just fill in the blanks, using figures from your own records, and you can calculate how much your present industrial trucks are costing you...and how much you can save by switching to electrics. Write Exide Industrial Division, The Electric Storage Battery Company, Phila. 20, Pa.

Exide®

THE ELECTRIC STORAGE BATTERY COMPANY

WORLD'S LEADING MAKER OF INDUSTRIAL BATTERIES

LABOR



McDONALD: ". . . Employers have been deliberately dragging their feet . . . in order to force steelworkers back to the mills by government pressure."



Peace Far Off as Mills Reopen—

The national steel strike is over after 116 days—but the way it ended may have unhappy consequences for a long time to come.

Steelworkers returned to jobs this week, a few at first to reopen the long-closed mills, then by the thousands (page 25). But, as they did, spokesmen for the industry and the United Steelworkers made clear that their argument over a new contract will still go on.

Basic differences that have barred a settlement ever since bargaining started May 5 still exist, as hard to settle as ever. They must be settled before lasting peace is assured in the steel mills. • **Tough Talk**—There is some optimism that they can and will be. There is just as much pessimism—perhaps more. The United Steelworkers is talking tough, hinting the possibility of a new strike as soon as it is legal to call one:

"Steelworkers do not quit. They are not about to give up that spirit now. They will not bow down," Pres. David J. McDonald of the USW warned a week ago, hours after the U.S. Supreme Court upheld a steel strike injunction.

Industry spokesmen were hardly conciliatory, although the negotiators led by R. Conrad Cooper pledged to continue bargaining.

• **Incentive Gone**—Regardless of how soon steel labor and management negotiators meet, face to face, for new contract talks, no quick agreement is in

prospect. It would be naive to expect one. Positions have hardened somewhat—not relaxed—now that mills are operating again and strikers at work.

During the long walkout, steel companies were under growing pressure to make peace with the union and get their mills back into production. The union was under growing pressure, too, as the strike dragged on. Moreover, it had an added incentive to negotiate a settlement while it could benefit from the pinch and pressures on the industry—before Taft-Hartley could be invoked.

The incentive is gone now, on both sides. For a time, neither the industry nor the union sees any substantial benefit to be had by compromising their firmly held positions. Joseph F. Finnegan, director of the Federal Mediation & Conciliation Service, was aware of this Monday, when he postponed for two weeks further efforts to get the opposed parties together.

• **But New Threat Ahead**—This does not mean that the industry and union are only marking time, now, between tests of power. Negotiations will be resumed after a short cooling-off period, and the first really serious bargaining in six months of contract maneuvers may be under way early next month. There are some substantial reasons why this might be so.

During all of the contract talks since mid-July, when the steelworkers quit the mills, the penalty for a failure to

agree was clearly in sight: The known procedures of the Taft-Hartley Act would be invoked when the government decided a threat to the national health and safety existed.

The only uncertainty involved was the timing. Whether they liked the prospect of the Taft-Hartley procedure or not, both parties knew exactly what was ahead, step by step—and it was from this that pressure on them arose.

Now, the pressure comes from the fact that the future holds no such certainty. Under the provisions of the act, the Taft-Hartley injunction upheld last Saturday can run only to Jan. 26—for 80 days. If there is no settlement by that date, the union will be free to strike again.

This would be an ominous freedom except for one thing. The law provides this future step:

... the President shall submit to the Congress a full and comprehensive report of the proceedings, including the findings of the board of inquiry and the ballot [on the employer's last offer] taken by the National Labor Relations Board, together with such recommendations as he may see fit for consideration and appropriate action."

It's these final few words that shore up hopes that the drawn-out dispute over a steel contract will not outlive the strike injunction. For they add a strong new element of uncertainty to the forthcoming steel negotiations.



COOPER: "A court order . . . is not the basis on which we had hoped work might be resumed. We sought resumption on . . . a sound, new labor agreement."

But Fear of Congress Is a Spur

• **Action to Come**—During the past weekend, Labor Secy. James P. Mitchell cleared away any shreds of doubt about the inevitability of White House action if a new steel contract isn't negotiated during the injunction period. He said bluntly:

"If the strike is resumed at the end of 80 days, certainly that will be a matter for Congress under the law. The Administration will have recommendations to Congress as to what to do to settle the strike."

What would they be? The Labor Secretary wouldn't say, except that they would be recommendations of action to bar any further interruption of steel production. "I don't think it's necessary to announce what they should be," he added.

So, when bargaining is resumed, both sides will know that unless more progress can be made in a few weeks than has been made up to now, the Administration will go to Congress with proposals that would inject the government deeper into steel contractmaking. Neither side wants that. Particularly, neither wants it because of the uncertainty about what the President might suggest—or what an angry Congress might do.

• **Fears**—Mitchell says he personally is opposed to compulsory arbitration, one procedure already suggested on Capitol Hill for barring another steel stoppage. He is disturbed by past failures of the Taft-Hartley Act cooling-off period to

promote real and successful bargaining, and feels the law needs to be reviewed. He would like to see more uncertainty written into its procedures—alternatives for the President to use.

He is afraid that national hysteria over the long steel strike—and fears of another one—might lead Congress to legislate proposals that might do damage to the free enterprise system.

Steel labor and management share this fear. Their renewed bargaining talks are likely to reflect this.

• **Timetable**—The 80-day injunction period began on Saturday, Nov. 7—the day the Supreme Court handed down its eight-to-one decision upholding the Taft-Hartley injunction. Under the law, the parties must continue bargaining throughout this period, with the guidance of the Federal Mediation & Conciliation Service. The board of inquiry named by the President at the time he invoked the Taft-Hartley Act was reconvened at midweek. It will work with Finnegan when he resumes mediation efforts (BW-Oct. 24'59,p25). The board, by law, must report to the White House again 60 days after the issuance of an injunction.

At that time, it is required to outline the "current position of the parties . . . and a statement of the employer's last offer of a settlement." This will come toward the end of the first week in January, after public hearings.

The National Labor Relations Board

is required to take a secret ballot of the employees of each employer involved in the dispute "on the question of whether they wish to accept the final offer of settlement." This must be done in "the succeeding 15 days" after the board of inquiry report, or roughly between Jan. 6 and 21. The NLRB then has five days to certify the results to the Attorney General.

If the steelworkers reject the final offer (no Taft-Hartley last offer has ever been accepted) then the Attorney General must ask the federal court to dissolve the injunction. The workers can strike again.

If workers vote to accept the terms in a company-by-company poll, the union must sign a contract on the terms with their employer.

• **First Step**—But those moves are still in the future. The next phase of the negotiations—under the wing of the FMCS—has been deferred until the last week of this month. Chief mediator Finnegan announced that the delay is due to the parties' "preoccupation with getting plants operating again."

It's a good bet, though, that this policy of letting the parties stay away from the bargaining table for a while has shrewd strategy behind it. When bargaining is resumed, it is going to be under concentrated pressure—intensive, multi-directioned, with quick and worrisome deadlines ahead. **END**

thanks to automatic XEROGRAPHY...



William H. Donaldson, left, Upjohn's assistant chief accountant in charge of data processing, points out to Ray T. Parfet Jr., center, vice-president, the

high quality and contrast of a reduced-size xerographic copy of an original sales report held by Edward C. Ritsema, head of the duplicating department.

Upjohn Saves 8 Days a Month on Sales Reports to Field

The Upjohn Company, one of the country's leading pharmaceutical manufacturers, mails a sales analysis report to each of its salesmen monthly. Copies of the report are also sent to members of the company's sales management. Five or six copies of each report may be needed, a monthly total of approximately 17,000.



The original reports are made up on a data-processing printer from the 50,000 tabulating cards air-expressed daily to Kalamazoo by the company's 18 branch sales offices. At the close of each month, every effort is made to get these reports reproduced and in the hands of the salesmen as quickly as possible.

Before Upjohn installed a XeroX® Copyflo® 11 continuous printer, it required an average of three or four hours by conventional copying methods for Upjohn's reproduction department to turn out the necessary copies for just one of the company's 18 branches.

Today, all is different, thanks to automatic xerography. Now, the same work is done in 14 minutes, and monthly sales reports are reaching the field six to eight days sooner than ever before.

Wherever low-cost, volume copying is the need, as at Upjohn, look first to automatic xerography for the happy solution. XeroX® Copyflo continuous

printers turn out dry, positive prints, ready for immediate use, at the rate of 20 linear feet a minute—an 8½" x 11" print in less than three seconds. The printers also prepare inexpensive offset paper masters and vellum intermediates for use on offset and diazo-type duplicators, respectively.

Copyflo printers enlarge, reduce, or copy size to size. They offer the fastest, most flexible, most inexpensive way to get copies precisely like the original from microfilm or opaque documents.

Write for booklet X-287 for full details. HALOID XEROX INC., 59-22X Haloid St., Rochester 3, N. Y. Branches in principal U. S. and Canadian cities. Overseas: Rank-Xerox Ltd., London.

HALOID
XEROX®

Reuther Stays, Adds to Power

He keeps his powerful Industrial Union Dept. within AFL-CIO, but he is taking on new leadership in areas where he says the top labor brass is doing a "flabby" job.

From the moment of the AFL-CIO merger four years ago, Walter Reuther's dissatisfaction with the big labor federation has been growing. And he has held the key to whether it will stick together at all.

This week, Reuther provided a clue to his future attitude toward the federation.

In a nutshell, he will keep his industrial unions solidly within the federation. But he will use them to stir up the "House of Labor" in areas where he thinks the federation has provided "flabby" leadership.

• **Takes New Role**—Reuther, whose main labor job is head of the United Auto Workers, this week laid out at the Industrial Union Dept. convention in Washington the major activities that lie ahead for unions: organizing, political action, collective bargaining, and legislation.

In so doing, Reuther moved IUD, which he also heads, for the first time into job of organizing. Up to now, the department, made up of 68 unions representing 7.2-million industrial workers, has pointedly referred all organizing matters to the AFL-CIO itself.

Henceforth, IUD will help its affiliated unions to pinpoint target areas, will settle conflicts over rival territories, and will provide technical organizing aid.

Although IUD also has bigger plans in the other areas, it is not taking giant steps. Reuther and other industrial union leaders want to avoid stepping on the toes of AFL-CIO Pres. George Meany—even though they intend to nudge the federation along as hard as they can.

• **Moderate Action**—Actually, in moving IUD activities up a notch, Reuther rejected demands from other union leaders that he do even more.

Reuther warned the 400 delegates, meeting in the ballroom of the downtown Statler-Hilton hotel, that labor has "grown a little bit flabby . . . a little bit soft in the middle." But, he also added that he felt it wasn't a time for internal dissension.

"Our trouble," he warned, "is that we have been on the defensive. In every aspect of the bargaining front, on the organizing front, on the legislative front, we have been backing up. Why, when they only cut our throat from this ear to within three inches of this ear, we say we almost scored a victory—

they were trying to cut our throat from ear to ear."

Reuther blamed labor's "defensive posture" as much on the AFL-CIO as on management and Congress. With the federation merger in 1955, he said, "we mobilized our opposition and then we failed to mobilize ourselves."

• **Powerful Potential**—The Industrial Union Dept. has a great power potential, with more money to spend than the federation itself has. Besides carrying the banner for its industrial affiliates in their jurisdictional disputes with the federation's craft unions, IUD will be increasingly involved in its unions' relations with employers.

Reuther's pressure on the parent federation will be gentle. Although Meany and Reuther have been at odds on many issues within the federation, Reuther apparently feels that he has nothing to gain by an all-out attack on Meany's leadership. One reason: Many observers believe that if Reuther were to openly attack Meany, the red-headed auto leader would lose forever his chance to head the merged labor movement when Meany goes.

Another reason for Reuther's decision to go slow is the division of opinion within the IUD on what line to take. IUD director Al Whitehouse, a former steelworkers' union official, told the delegates that the department was not a "power bloc . . . but is performing an important function within the AFL-CIO."

Whitehouse—and others within the IUD—want to play down any talk of split. "I stress the phrase within the AFL-CIO," Whitehouse added, "because the IUD proudly regards itself as an important part of the merged labor organization's basic structure."

Despite this cautionary note, the evidence is that the IUD is staking out an area where it will duplicate many jobs that are now being handled by AFL-CIO—jobs that Reuther thinks aren't being handled well enough.

• **The Next Goals**—Convention delegates decided on these targets:

• The first organizing program by IUD, "to provide for maximum cooperation and coordination between affiliated unions in advancing organization drives . . ." white-collar and farm workers were cited as the general unorganized targets, plus such under-organized industries as textile, oil, chemicals, and state and municipal employees.

• A campaign for "centralized" bargaining among IUD's unions, where they have "contracts with the same industry or with a common employer," to coordinate demands and tactics. "More and more," said Reuther, "industry is getting centralized directions. . . . We need to meet that problem by tying ourselves together."

• A stronger political action program geared to social legislation. "We can do a better job, not in terms of narrow labor issues or fighting negative anti-labor legislation," said Reuther in an indirect criticism of the federation's legislative campaigns. IUD intends to publish its own Congressional voting records alongside those of the Committee on Political Education (COPE). It will also step up its own lobbying in Congress.

• "A stepped-up public relations program . . . to educate our members" and to "carry where we stand on the basic issues to the American people." Already, IUD releases economic, legislative, and labor reports that at least match the parent AFL-CIO in volume.

• **Louder Demands**—There was pressure on some fronts for IUD to raise its head even higher. O. A. "Jack" Knight, president of the Oil, Chemical & Atomic Workers, has been engaged in a running jurisdictional fight with AFL-CIO's craft unions. But, with the decision to go easy on internal AFL-CIO troubles, he settled on the convention floor for a resolution asking an "equitable procedure" for solving job conflicts.

The International Chemical Workers Union and its president, Walter Mitchell, came to the convention armed with a couple of resolutions—on organizing and on a strike defense fund. Both resolutions were aimed at concrete IUD action rather than a general statement of policy, but they both lost out.

Reuther took pains to point out to the delegates that even the organizing program that was adopted did not call for an actual organizing department. IUD, in the past, has sharply criticized the AFL-CIO Metal Trades Dept. for out-and-out organizing.

As for strike benefits, Reuther backed a resolution in which "the department calls upon all its affiliates to cooperate and aid those unions engaged in strikes." Reuther apparently decided that IUD's affiliates weren't ready to buy a plan for a per capita levy for a strike war chest of their own.

But, said Reuther, "I hope the day will come when we can work out . . . a common defense fund, so that any union taken on will have the support of the whole labor movement." **END**

Keeping tabs on 9,300 miles of pipeline...



Teletype equipment is control key to giant pipeline operation

With instantaneous Teletype communications, a major pipeline company's most distant pump and compressor station is as close to headquarters as if it were located right next door. This company's new Teletype message center (shown above) handles as many as 40,000 messages each month—along with 30,000 "run tickets" that record the movement of crude oil and refined products.

The message center is the hub of a communications system which keeps headquarters supplied with up-to-the-minute field data . . . handles administrative traffic and general information . . . and transmits dispatcher's instructions to five divisional points and 200 pump and compressor stations along 9,300 miles of pipeline.

Accurate. Teletype equipment provides a *printed record* of all data and instructions for both sender and receiver—so there is less chance of costly errors.

Extra Benefits. As "run tickets" are received at the message center, Teletype equipment also produces—

automatically—an extra punched tape with all the data for accounting needs. The accounting department is able to transfer the tape directly to business machines—no lost motion, no recopying required.

Additional Information. This is just one example of the versatility of Teletype equipment, with its many built-in controls. For more information about Teletype equipment and how it is helping to speed communications and streamline paperwork routines, write to Teletype Corporation, Dept. 12L, 4100 Fullerton Avenue, Chicago 39, Illinois.

TELETYPE®
CORPORATION
SUBSIDIARY OF *Western Electric Company INC*

In Labor

NLRB Braces for the Swarm of New Cases Expected to Follow New T-H Amendments

The Landrum-Griffin amendments to the Taft-Hartley law went into effect this week on Friday the 13th. And Stuart Rothman, general counsel of the National Labor Relations Board, for one, is prepared. He has reorganized his office in preparation for a swarm of new cases expected under this section of the reform act. The office handles complaints from management and labor on alleged violations of the Taft-Hartley law.

Already fielding an average 21,000 cases a year, Rothman anticipates "thousands" more. The reform act has new secondary boycott and organizational picketing controls that Rothman expects will be the basis for many complaints.

Rothman's reorganization, which was developed "after four months of intensive study," splits up the division of operations. The NLRB's case-handling arm will have several special divisions to help handle the load: a time and performance control unit to make sure cases are speeded along; and an operations advice unit to give prompt advice on how to handle the new legal provisions; and an administrative section confined to "housekeeping."

Mine Workers, Operators Agree Not to Police Ban on Nonunion Coal

John L. Lewis' United Mine Workers and the nation's soft coal operators have agreed not to police a contract ban on the buying of nonunion coal by commercial mines. The decision, disclosed this week, followed doubts on the legality of the contract under the labor reform act, which severely restricts secondary boycotts.

The contract clause in doubt prohibits unionized companies from buying, selling, or handling coal produced under nonunion conditions. It is one of the issues in a nine-months-old eastern Kentucky coal strike (BW—Sep. 19'59, p53).

The operators and the UMW are expected to seek a court test of the law in the near future.

Union Gains in Supervised Elections Scored Near-Record Low in Third Quarter

Union gains in representation elections supervised by the National Labor Relations Board fell to a near-record low in the third quarter of this year.

NLRB figures show that unions won 872 of the 1,494 representation elections conducted in July, August, and September for a victory ratio of 58%. This is the lowest in the 12-year history of Taft-Hartley except for a 57.8% figure posted exactly a year ago.

Government compilations show that union organiza-

tion efforts suffered a sharp setback after the Senate rackets committee began its hearings in January, 1957. In the three years preceding the hearings, unions won about 65% of NLRB supervised elections. Since then, the ratio has declined steadily except for a slight rise during last year's recession.

About 64% of the 96,667 employees who participated in representation elections in the July-September period voted for unions.

Charges of an Attempt to Rig Election Invokes New "Bill of Rights" Laws

The "bill of rights" provisions of the new labor reform law were invoked for the first time last week to halt an election in a New Jersey local of the Teamsters.

A temporary restraining order barred any action by the 10,000-member local to nominate or to revise election by-laws pending a court hearing Nov. 23. The order was issued on the petition of two rank-and-file insurgent members, who charged that attempts were being made to "rig" the election in violation of their rights to free assembly and free expression under the new law.

Local 560 is headed by Anthony Provenzano, a lieutenant of Teamsters' boss James R. Hoffa. Hoffa has rejected a demand by court-appointed monitors that he oust Provenzano on charges that he took payoffs from employers to guarantee labor peace.

Provenzano has sent a letter to all members of the local, promising compliance with the court order. He also said that he had retained the Honest Ballot Assn. to supervise the local election, scheduled for Dec. 12.

Highest Monthly Loss of Man-Days

New strikes in September brought the total number of strikers out on the bricks to 760,000, according to Labor Dept.'s Bureau of Labor Statistics. The number of workers involved in new stoppages—100,000 workers—was the lowest for any September since 1947.

But the total of man-days lost in the month—from new and continuing strikes—was 14-million man-days, the highest monthly total since the record breaking month of June, 1952, when another steel strike was in progress.

In addition to steel, there were nine other stoppages in effect during September in which 5,000 or more workers were involved. Two began in September; only three were settled during the month.

New Jersey Mediators End Singer Strike

Mediation efforts by the New Jersey Mediation Dept. last week ended a week-long walkout of 3,200 employees of the Singer Mfg. Co., of Elizabeth.

Members of Local 461, International Union of Electrical Workers, ratified a one-year pact containing wage increases ranging from 5¢ to 15¢ an hour for day workers.

Employees on incentive standards will get 4¢ more on the base rate, which works out to an average 6¢ hourly hike, according to the company. The previous average hourly wage was \$2.38 an hour.



Big Steel Picks a New Boss

Leslie B. Worthington (picture, above) takes over as president of U. S. Steel Corp. with a tough assignment—coping with the issues raised by the 1959 union negotiations.

What are the "people problems" that beset an unusually effective organization as a result of industry's longest strike?

How do you end successfully your most thoroughly prepared, yet least effective, labor contract negotiation?

What can—and should—you do about the implications of your industry's first nationwide injunction?

How do you approach the possibility—posed by the terms of the Kaiser Steel Co. settlement—that your industry may become involved in a labor contract that invites the union and the public to help set company financial policy?

And, since you're inevitably the industry leader, how do you accommodate your own company's approach to all these problems without either strengthening or weakening your competitors?

Those are the most urgent questions facing the president of the United States Steel Corp. The job was handed

this week to Leslie B. Worthington, who simultaneously became a director, chief administrative officer, and chairman of its executive and operations policy committees.

I. A Different Job

Worthington quite possibly is U. S. Steel's best-prepared candidate for the presidential job as it existed last May, when it was taken by the late Walter F. Munford (BW-May'59,p30). But no one has been trained at all specifically for the dimensions of the job today. Six months ago, these dimensions hadn't even been dreamed of.

Worthington's election at a special meeting of U. S. Steel directors startled quite a few people. It's not that he wasn't regarded highly. Rather, the speculation had been that the Corporation would continue, as with Mun-

ford, to lead with its top operating aces (BW-Oct. 3'59,p36). In picking Worthington, who is 57, it switched to a man whose 36-year career has been wholly in U. S. Steel sales and administration. Plainly, the new job dimensions affected the choice.

Worthington had been president of U. S. Steel's Columbia-Geneva Steel Div. since 1957—a job he moved into after Alden Roach was killed in a company plane crash. Before that, Worthington had for 11 years been president of the U. S. Steel Supply Div., the Corporation's warehousing operation. He started his career in 1923 as a USS sales apprentice, and he sold for Carnegie-Illinois in Chicago, St. Paul, Detroit, and Pittsburgh before becoming a supply division vice-president at Chicago in 1942.

- **Negotiation Woes**—When Walter Munford got the job last May, the USS presidency shaped up as posing some real problems in sales and marketing. None of those problems has vanished.

Long-term, they will shape the Corporation's future fairly profoundly. But the massive troubles that sprang from the 1959 contract negotiations must be dealt with first.

- **Versatile**—Worthington was born in England and brought to the Illinois soft coal fields as a child. He was graduated from the University of Illinois.

Strictly from his record, it's hard to imagine how anyone at the Corporation could be any better versed than Worthington in quite a few important aspects of its operations, including its product mix—the broadest in the trade—and the problems of its customers—ranging from the largest (Detroit) to the smallest (the "couple of hundred pounds") warehouse.

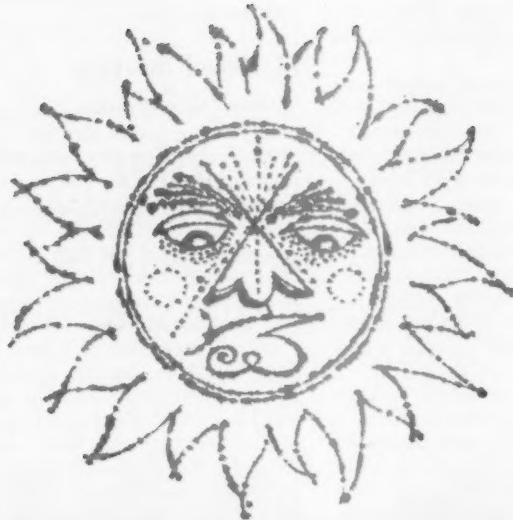
- **Mr. Worthington**—Insiders who have worked with or for him say he combines an attractive personal warmth with firm, demanding leadership. They say people like him—but call him Mr. He's described as inordinately energetic—always on the go, visiting plants or customers or consulting his managers.

"He can talk metallurgy with the customer who's got heat-treating problems, or machinability with the proprietor of a three-man, back-alley shop," says one insider. "He's handled service problems with the auto makers, competed with Bethlehem-Pacific and Kaiser on the coast, and represented quite a few USS divisions, saleswise, out there."

II. The Corporation and People

An old business saw is that sales training is the best training because you can sell successfully only if you know people thoroughly. If that's correct, both Worthington and USS are lucky.

People are more deeply involved than



SHERATON-PORTLAND HOTEL, PORTLAND, ORE. Architect: Church, Newberry, Roehr & Schutte; Consulting Engineer: J. Donald Kroeker & Associates; Mechanical Contractor: J. M. Harder Plumbing & Heating Company.



Climate by Chrysler

Pumps out heat in summer,
pumps in heat in winter . . .
saves money all year
for new Sheraton Hotel

The most complete heat pump system ever installed in a hotel is providing a money-saving answer to the problem of all-year air conditioning for the new Sheraton-Portland, in Portland, Oregon.

The system takes advantage of low local power rates and utilizes available well water. In summer, two 250-hp Chrysler Centrifugal Heat Pumps use the water to absorb heat from indoor air and keep the hotel cool. In winter, the cycle is reversed. Heat is extracted from the water and pumped into the hotel.

Individual Chrysler fan-coil units give occupants of each room complete control over indoor climate. Public spaces are served by Chrysler central air-handling units.

The Chrysler Heat Pump is versatile: It also supplies domestic hot water for the hotel's 300 rooms, and delivers, through boosters, near-boiling water for the kitchen. And the system is economical: It costs less to operate than conventional year-round air conditioning . . . and it even warms the swimming pool without added cost.

Whether your air conditioning requirements are best met by a heat pump or conventional air conditioning, Chrysler has the equipment and technical know-how to do the job better . . . for less. For information on the mechanics or economics of Chrysler equipment, see your consulting engineer, or write today.



CHRYSLER
AIRTEMP

Airtemp Division, Chrysler Corporation, Dept. C-119, Dayton 1, Ohio
In Canada: Therm-O-Rite Products, Ltd., Toronto, Ontario

(Advertisement)

CONDEMNATION AWARD INCREASED FROM \$400,500 TO \$2,100,000 ON TESTIMONY OF EXPERT WITNESSES

In proceedings involving the condemnation of a privately owned housing project, condemning authorities testified that the value of the owner's equity was \$400,000. In the belief that an offer made before the action was not based on a realistic appraisal of this property, the project owners had retained Marshall and Stevens, valuation engineers to make an appraisal of the property under consideration. As a result of the appraisal by Marshall and Stevens and the testimony of Marshall and Stevens and other expert witnesses, the jury made an award of \$2,100,000.*

APPRAISAL COMPLIES

This is just one example where the retaining of an unbiased national appraisal firm, to realistically appraise the situation and render a report based on fact, can lead to an equitable and logical decision.

APPRAISALS FOR SPECIFIC PURPOSES

Marshall and Stevens' staff of experienced appraisers are qualified to analyze your particular valuation problems, and prepare appraisals for the following purposes: fair market value, mergers, re-financing, insurance, proof of loss, income tax, gift tax, segregation of purchase price, inheritance tax, catastrophe damage value, accounting and tax assessment for public agencies as well as private owners.

The informative booklet "Condemnation and the Appraiser" is yours for the asking. Write Marshall and Stevens, 420 Lexington Ave., Dept. 287, New York 17, New York.

*Actual case history on file.

ever in the future of U. S. Steel. People, for example, may spend the rest of their lives actively resenting the fact that they could only resume their jobs under an injunction. If enough of them are U. S. Steel employees, you could have a morale problem that could reverse a successful 20-year drive to make the Corporation the most efficient steel producer in the land.

• **Union Proposal**—And people ultimately will decide how seriously U. S. Steel management's "right to manage" will be eroded in order to get a new labor contract—which, at least from the industry's viewpoint, just about has to be agreed to within the next two months. The United Steelworkers is driving hard for industrywide acceptance of the Kaiser Steel contract's tripartite consulting committee. That committee is a supra-managerial group whose recommendations inevitably will have a lot to do with the way future earnings are divided between workers and stockholders. Automatically such a concept gets people, in the form of stockholders, employees, and customers, into decisions on such things as profits, prices, and productivity.

Worthington and his two associates in the triumvirate that runs U. S. Steel—Chmn. Roger M. Blough, who's also chief executive officer, and Chmn. Robert Tyson of the finance committee—have about two months to solve that "people" problem independent of Congressional action.

III. Down the Line

With the Worthington announcement, USS released the first of the inevitable chain of promotions that will follow. Harvey B. Jordan, executive vice-president (production), who was figured too close to retirement for the job Munford got last May, relinquished his production job and became executive vice-president and chairman of the general administration committee.

He was succeeded by Edwin H. Gott, who last May became administrative vice-president for central operations (steel and coal). Gott, at 51, had, along with Worthington, been speculated about for some time as a man marked for further promotion at U. S. Steel. In recent years, that hasn't been long in coming.



Iron Ore Fleet Expands—with a Splash

Bethlehem Steel Corp.'s newest ore carrier, a 730-ft. long, 25,000-ton vessel named for Bethlehem's Pres. Arthur B. Homer, went down the slipway at Great Lakes Engineering Works, Detroit, last week and caught dockside

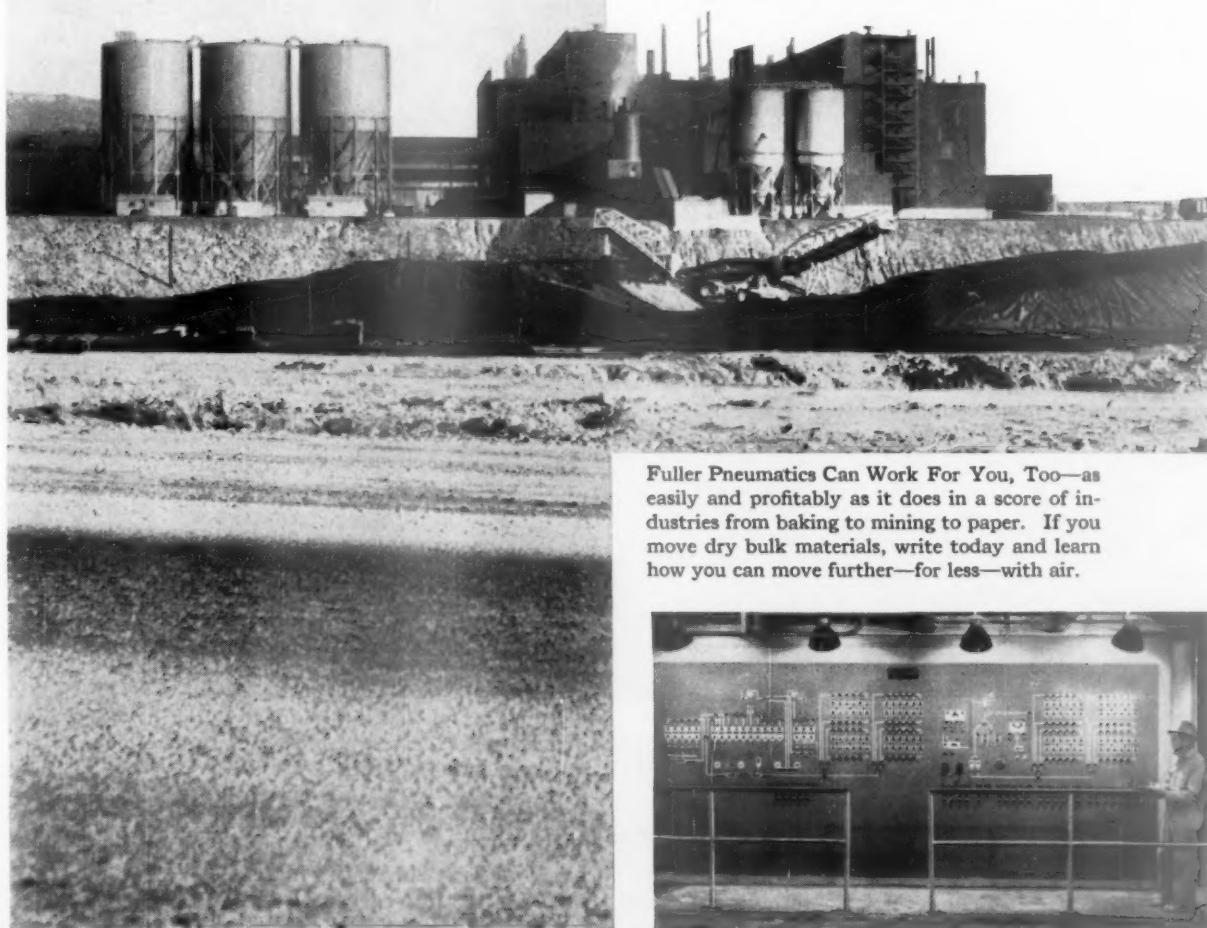
spectators unawares. The ship, largest ever launched on the Great Lakes, hit the water in typical sidewise Great Lakes launching fashion—then sent up a wave that put spectators up to their hips in water.

How Pneumatic Conveying Helps Make New Mining Process Economically Practical

Taconite processing is typical of the many varied, cost-saving applications for Fuller Pneumatic Conveying.

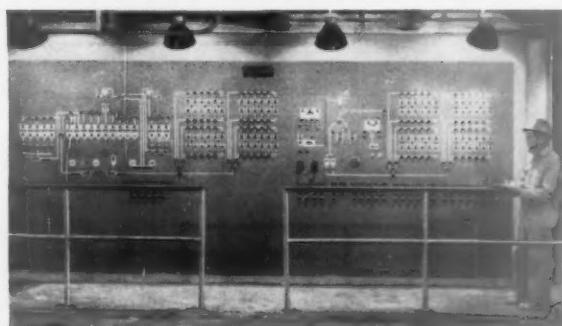
They're turning low assay iron ore into rich pellets on the Mesabi these days. Moving additives for pelletizing, Fuller plays a special role in this feat of engineering and production economy.

Fuller Pneumatic Conveying Systems are carrying fine anthracite screenings, soda ash, and bentonite from siding to storage to processing—with speed, safety, sanitation, and efficiency. With few moving parts to wear out and powered by inexpensive low-pressure air, Fuller Pneumatic Conveying Systems speed dry bulk materials *anywhere that a pipeline can be run*: under ground, up through floors, around corners . . . for far greater distances and at substantially lower cost than possible with mechanical conveyors.



Four Fuller Pneumatic Systems can speed more than 307 long tons of additives through this huge Taconite Pelletizing Plant in a single day.

Fuller Pneumatics Can Work For You, Too—as easily and profitably as it does in a score of industries from baking to mining to paper. If you move dry bulk materials, write today and learn how you can move further—for less—with air.



Centralized control is provided by giant panel designed and manufactured by Fuller.



FULLER COMPANY
180 Bridge St., Catawba, Pa.
Subsidiary of General American Transportation Corporation
Offices in Principal Cities Throughout the World

Fuller
pioneers in harnessing AIR

2097
G229

In the Markets

• • •

Stocks Decline After Brief Rally Following Steel Strike Injunction

After an initial burst of enthusiasm, stock prices declined this week in the wake of the Supreme Court's decision upholding the injunction against the steel strike. Investors apparently felt no urge to bid up prices after a court decision which settled none of the basic issues in the steel dispute nor guaranteed an agreement.

Brokers report that though stocks are not in the dog-house, the fervor for equities has been dampened by restrictive credit and the prolonged steel strike. And brokers feel the market averages will remain in a narrow trading range until the strike is settled. This would be in sharp contrast to the straight-line ascent in 1958, and the sharp spills this summer.

Brokers add that the market is more of a trading market than at any time since early 1958. It's obvious that specialty stocks are getting a big play. Motorola and Coca-Cola were favorites this week, hitting new highs.

• • •

Sonnabend and Associates Buy Big Block of Alleghany Stock

A. M. Sonnabend will go into a huddle with Alleghany Corp. officials next week to see what role he will play in the holding company's future. Sonnabend and several associates have now bought over 700,000 shares of Alleghany—or nearly 15% of the issue. This apparently gives him control of more common shares than those held individually by Allan P. Kirby and Mrs. Robert R. Young, and prompted a meeting this week between Sonnabend and Kirby as to what the industrialist's ideas were for the holding company. Alleghany's investments are mainly in Investors Diversified Services, a mutual fund, New York Central RR, and Missouri Pacific RR.

No details of their discussion were made known, but Sonnabend's group continues to purchase Alleghany common in the open market. The stock traded at \$14.12 this week, up from its year's low of \$9.75.

• • •

Commodity Prices Continue to Rise; Copper, Zinc, Tin, Lead Are Up

Commodity prices, on the rise since the recession's end, are still rising. Because of labor disputes and seasonal pressures, U.S. companies are bidding up African copper, usually exported to Europe. The upward price pressure on copper, which is aggravated by Washington's decision not to sell from stockpile, has been accentuated by the resumption of steel production, since metal users will step up copper consumption, too. Custom smelters have discontinued price quotations, and brass prices are rising in sympathy.

There's a real squeeze developing for dealers in zinc, which has shot up 30% in price since last April, because they find no metal now to cover previous forward sales. Lead prices are up 7% this month, after hitting a low for the year in September. Tin, on expanding demand, has jumped 5% in the last 3 months. And despite recent stockpile sales in England and the U.S., rubber this week hit a four-year high on reports of short supplies in Singapore, where there's talk that dealers may not be able to meet existing commitments.

Meanwhile, coffee and cocoa are on the price uptick because of the longshoremen's strike, temporarily frozen by a Taft-Hartley injunction. Importers are piling up huge supplies while the ships still sail—coffee inventories are 71% above a year ago, and cocoa on U.S.-bound ships now is 10 times that of a week ago.

However, the outlook for U.S. staple commodities is bleak. Lower hog, poultry, and wheat prices have already pushed farm income down for the second year, and scheduled cuts in price supports are still ahead for wheat, cotton, and corn.

• • •

New Sale of Ford Stock by Foundation Is Rumored on Wall Street

Word leaked out of Wall Street this week that the Ford Foundation may be planning to sell another 2-million shares of its 34.1-million share holding of Ford Motor Co. class A common stock. The rumor promptly knocked Ford's market price down about 3 points; at midweek it was selling at about 77. At this level, the offering would bring in about \$154-million, making the sale one of the biggest so far this year. A similar Foundation sale—at \$56.50 a share—last March netted \$113-million (BW-Mar.21'59,p141).

Despite a "no comment" from the foundation, a source close to one of the underwriters said that a registration statement covering the sale would be filed with the Securities & Exchange Commission "very shortly."

• • •

Success of Treasury's Latest Offer Eases Way for Big February Refunding

The Treasury was pleased with the results of its latest financing in which 85% of the public's holdings of maturing issues were exchanged for new high-yielding obligations. Most investors holding \$2-billion in 4% notes redeemable either in February, 1960 or 1962, who were offered premature exchange into a new 4½% issue maturing in 1964, chose to take advantage of the offer. Those who did not presumably will take cash in February, virtually eliminating the issue.

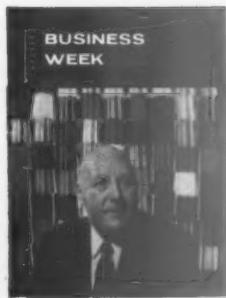
In making this exchange, the Treasury will have an easier time in its big February refunding. And bond men in general say it is now clear that a crisis in the market is unlikely. Instead, they expect continued pressure, first from the Treasury's demands, later from the demands of corporations. But it now appears likely that the pressure of demand will be stretched out rather than concentrated, which suggests that money rates will be tight but not to an extreme.



Coast to coast, management's host

Many executives (perhaps you, too) make it their business to stop at a Sheraton hotel. Coast to coast, Canada, even in Hawaii . . . they know the Sheraton marquee means their special kind of service. And understandably so, for behind this organized hospitality is a man of their own stamp, Sheraton President Ernest Henderson. He thinks as they do, understands what they want. Why, he even reads the same management magazine they do . . .

Business Week. So, too, many of his associates. But this shouldn't surprise you, for management men everywhere vote Business Week "most useful" of all general-business and news magazines. And, apparently, "most useful" in their selling, as well . . . for again in 1959, Business Week leads all general-business and news magazines in total advertising pages. *A McGraw-Hill Magazine — Member Audit Bureau of Circulations.*

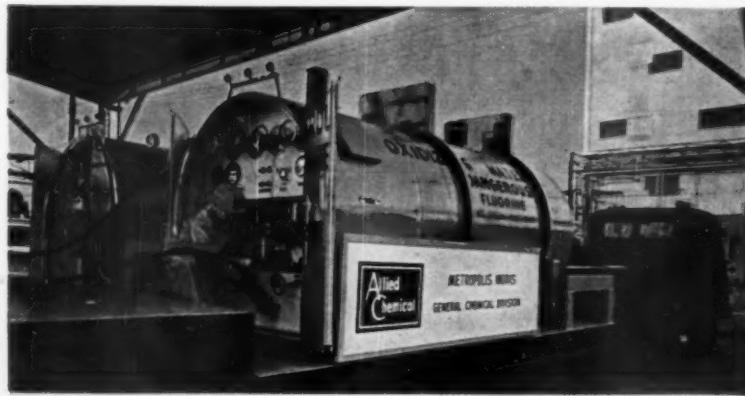


NEW BOOST FOR FROM ALLIED

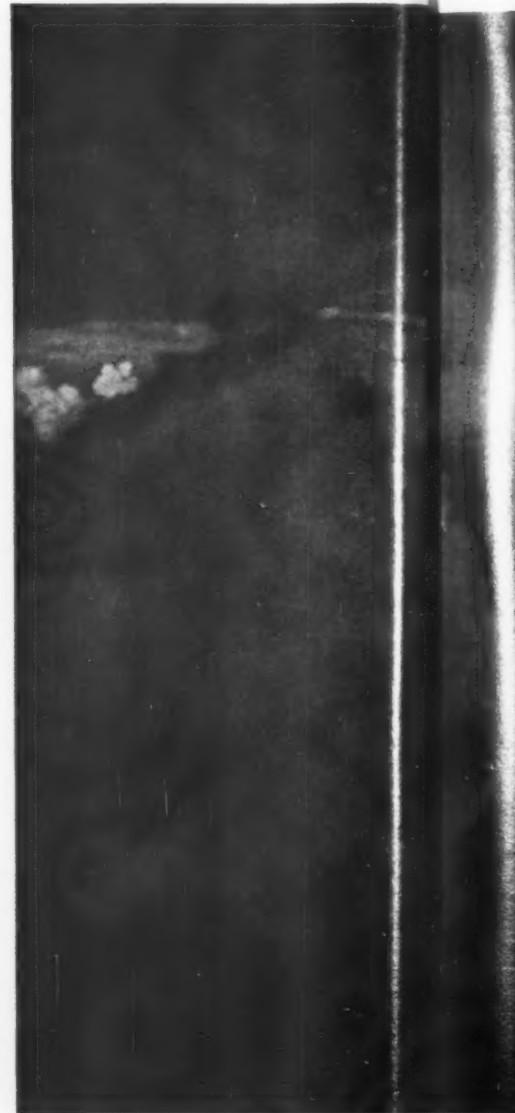
*...where people with ideas
open doors...  to better products!*



Greater thrust for rocket engines. The power for space travel is locked in these fluor spar crystals, source of fluorine. Combined with hydrogen, fluorine provides the most powerful chemical thrust. Our General Chemical Division, the sole supplier of liquid fluorine, also makes halogen fluorides. These fuel oxidizers give a uniquely high-density impulse, pack the most energy into relatively small rocket systems.



Big savings in chemical transportation. Highly reactive fluorine, once limited in use because of costly transportation as a gas, can now be carried safely as a liquid in tonnage quantities. Our General Chemical people devised this refrigerated, insulated, triple-tank truck which made liquid fluorine transportation a reality. Essentially a giant "thermos bottle," it opened the door to large-scale use.



DIVISIONS:

BARRETT

GENERAL CHEMICAL • INTERNATIONAL

NATIONAL ANILINE • NITROGEN

PLASTICS AND COAL CHEMICALS

SEMET-SOLVAY • SOLVAY PROCESS

In Canada:

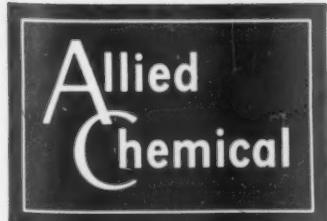
Allied Chemical Canada, Ltd., Montreal

BASIC

ROCKET ENGINES CHEMICAL...



Photo courtesy of Aerojet-General Corp.



BASIC TO AMERICA'S PROGRESS

Rocket engine test firing. This is one phase in the extensive search in rocketry today for an instantly ready fuel. Research at our Nitrogen Division points to *nitrogen tetroxide*, an effective oxidizer with high combustion efficiency. Easy to handle, noncorrosive, requiring no refrigeration, nitrogen tetroxide can be stored indefinitely in a missile at a launching site, instantly ready for firing. Research that boosts rockets can also be directed to the down-to-earth problems of businessmen. To find out how we can help you, just write to Allied Chemical Corporation, Dept. 119-B, 61 Broadway, New York 6, N.Y.

YOU
CAN'T IMAGINE
HOW JOYOUS A
COMPACT CAR
CAN BE ★ until
you've driven the
REAR-ENGINE
Corvair

by Chevrolet



There's nothing like a new car—and no new car like this de luxe Corvair 700.

You can read about Corvair's air-cooled "pancake" Six, its aero-light frameless construction, its remarkable independent suspension at every wheel. But words can only hint at Corvair's thistledown steering, the wonderfully *supple* quality of its ride, the nimble bulk-free precision of its going. You'll have to drive it before you really know how big a revolution in auto design Chevy has touched off—America's only compact car that isn't just a small echo of a big one.

Practically flat floor—*The only compact car that gives you this kind of 6-passenger comfort.*

A magician on mileage—*Gets 25 to 40% more miles than conventional 6's on a gallon of regular.*

No fussing with antifreeze—*Only time it uses water is when you wash it.*

Trunk's up front—*Lots of luggage space under the hood, where it's convenient to get to.*

Unipack power team—*Wraps engine, transmission and drive gears into one compact package. Takes less room, leaves you more.*

Fold-down rear seat*—*Converts easily for a total of 17.6 cu. ft. of extra storage space behind front seat.*

All at a practical kind of price—*Check your dealer on the short, sweet details. Chevrolet Division of General Motors, Detroit 2, Michigan.* *Optional at extra cost.



The revolutionary Corvair . . . with the engine in the rear where it belongs in a compact car.

PERSONAL BUSINESS

BUSINESS WEEK

NOV. 14, 1959



Remember when "crossing by boat" was one of the biggest thrills of your trip to Europe? Particularly if you were a pampered passenger on one of the luxury liners? Well, it's still a relaxing way to travel.

The furor over jet flights has partly obscured the fact that sea travel, too, is entering a new age. The shipping lines have embarked on a broad program that will put a lot of new ships into service for those who prefer ocean travel to flying.

The statistics alone will surprise you—over 33 passenger ships either under construction, awaiting appropriations, or on the planning boards. Over-all, they will provide accommodations for about 70,000 passengers.

Discount the impression you may have about first-class travel being greatly curtailed in favor of one-class "mass transportation."

On the one-to-three-class ships providing space for about 26,000, more than 10% of the staterooms and cabins will be de luxe or first class.

And you can figure on plushier first-class travel. Stabilizers and air conditioning are now practically standard equipment. Shipping lines are busy polishing up the old concept of elegance. This is revealed particularly in cuisine and shipboard entertainment.

Note these few samples of services and luxuries that will be featured on the new liners: closed-circuit television, infrared heat for deck lounging in cold weather, complete health centers, theaters equipped with cinemascopic screens and stereophonic sound, both indoor and outdoor swimming pools. There'll also be Hawaiian-style "lanai" suites with picture windows, formal Japanese gardens, staffed schools for children, observation lounges atop pilot houses, and short-wave radios in staterooms.

The new ships will give you plenty of choice between a leisurely voyage and a trip that will cut down today's sailing times considerably. For example, the Italian Line plans two 35,000-ton liners (1,800 passengers each) that will be faster than anything now on the New York-Mediterranean run. The *Canberra* (Orient & Pacific)—the largest ship to be built in the British Isles since the Cunard "Queens"—entering service in 1961, will travel at 27½ knots, trimming travel time from England to Sydney from 31 to 25 days. The *President Washington* (American President Lines)—the costliest (\$97-million) in the U. S. flag fleet—will make the West Coast to Orient roundtrip in 32 days, about 10 days faster than present schedules. Six proposed all-tourist class superliners (Sea Coach Transatlantic and American European) aim for four-day crossings.

Here's a quick look, by areas to be served, at some of the new ships:

Channel and northern European ports. The \$72-million *France* (French Line) will enter service early in 1962. *Prinses Margriet* (Royal Dutch Line), all first-class, starts service the end of April, 1961. A 55,000-ton sistership for the United States (U. S. Lines) is a possibility for 1962. The 27,000-ton *Empress* (Canadian Pacific) is set for launching in 1961.

Mediterranean. The 11-deck *Leonardo Da Vinci* (Italian Line's flagship) will leave Genoa for New York on its maiden voyage next June 30. *American Export Lines* is studying plans for a superliner for the Genoa-Cannes-New York route.

Caribbean. The *M. S. Victoria* (Ingres-Nassau) will make its maiden voyage Jan. 25 (no cargo stops on any trips). *Grace Line* is scheduling three new passenger-cargo vessels in about two years.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

NOV. 14, 1959

South Pacific and Orient. The newly christened \$40-million *Oriana* (Orient & Pacific) will make its maiden voyage from Great Britain the end of 1960. **Lloyd Triestino** plans two 800-passenger ships for 1963 service from Italy to Australia and the Orient. British **Shaw Savill Lines** has issued a call for bids for a 20,000-ton liner for South Pacific routes. Two **Sea Racers** (American President), cargo-passenger ships with some de luxe accommodations, will enter service in 1961 for round-the-world trips.

South America and South Africa. **Windsor Castle** (Union Castle) will make its maiden voyage next Aug. 18 in the Southampton-Cape Town-Durban run. Three sister ships, **Amazon**, **Aragon**, and **Arlanza** (Royal Mail Lines) will begin service on Great Britain-to-South America routes next year.

If you want to go on any of the festive maiden voyages, better get your travel agent to work now. The demand for reservations is keen. For example, more than half the passenger space has been booked for the first crossing of the France, still more than two years away.

—•—

Will you be doing some yearend tax-selling in the next few weeks? If so, here's a refresher on how to approach some of the more typical situations (BW—Dec. 6'58, p121):

Where you have only long-term gains: Probably you would sell to take advantage of the (25% maximum) capital gains tax rate. Tax is 10% if you're in the 20% bracket, up to 23½% for the 47% bracket, and 25% if your bracket is 50% or over.

Where you have short-term gains: You would likely hold your securities until after the six-month period, to gain a long-term, capital gains position.

Where you have long-term gains, and losses that are long-term, short-term, or both: You might realize your gains to get the lower tax rate, and reserve your losses to use next year—for example, to offset expected short-term gains. (Note: If your losses are small—limit \$1,000—you'll likely want to take them this year, to offset ordinary income.)

Where you have long- and short-term gains and both types of losses: Normally, you would realize long-term gains one year, and short-term gains and all losses in another year.

Where you have short-term gains and either short- or long-term losses: The losses can be used to offset these gains, and any excess loss used to offset ordinary income up to \$1,000. Excess loss can be carried five years.

Warning: The "wash sale" rule causes much trouble. It says you can't deduct a loss if you buy stock in the same company within 30 days—and this means 30 days before and 30 days after the date of the loss sale.

—•—

Potpourri: American Express credit card holders now may use telephone, telegraph, or mail to charge items at flower shops, book stores, and fruit shipping shops that honor the card—and if it's a telegram, they even can charge that through Amexco. . . . Now you can visit any town in Russia that has an Intourist hotel—without a guide-interpreter tagging along. . . . The J. K. Lasser 1960 Tax Aid Record & Appointment Book is available, to help you nail down all possible business expense deductions (Business Reports, Inc., 1 West Ave., Larchmont, N. Y., \$5.95). . . . A survey of more than 4,000 Massachusetts physicians shows that currently only 39% smoke cigarettes—five years ago the figure was 52%.



SWING-A-WAY

sees clear sales advantages in product-line
packaging with vacuum-formed Celanese Acetate



"These five most-popular Swing-A-Way products are now out on view," says Al Packer, Vice-President of Swing-A-Way Manufacturing Co., St. Louis, Missouri. "They are on display right where customers can reach for them, thanks to blister-packaging with Celanese Acetate. The clear, sturdy acetate lends an extra sparkle and protects the product at the same time. It adds up to better sales and more profits."

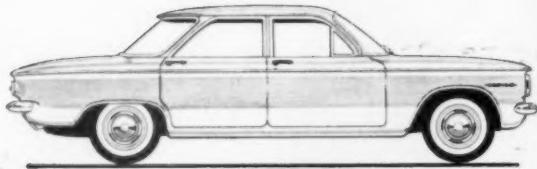
It's true in most cases: contour packaged items made with Celanese Acetate outsell products merchandised in bulk or in conventional packages. Frequently, they simplify dealer operations. Celanese Acetate is ideal for packaging products in sets and entire lines. You can package a great variety of sizes and weights, from sets of shoelaces to heavier items such as these can openers which weigh up to 1½ pounds. Fully automatic machines are now available that form blisters directly from rolls of Celanese Acetate, and fill, seal and trim at rates up to 18,000 units per hour! Your packaging costs go down!

We'd be pleased to send you more information on vacuum-forming with Celanese Acetate. Write to: Celanese Plastics Company, a Division of Celanese Corporation of America, Dept. 128-K, 744 Broad St., Newark 2, N. J. Celanese®

Canadian Affiliates: Canadian Chemical Company Limited, Montreal, Toronto, Vancouver.
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16.

acetate . . . a *Celanese* packaging plastic

now you can lease a cost-cutting Corvair



(BY CHEVROLET)

fleet from Hertz



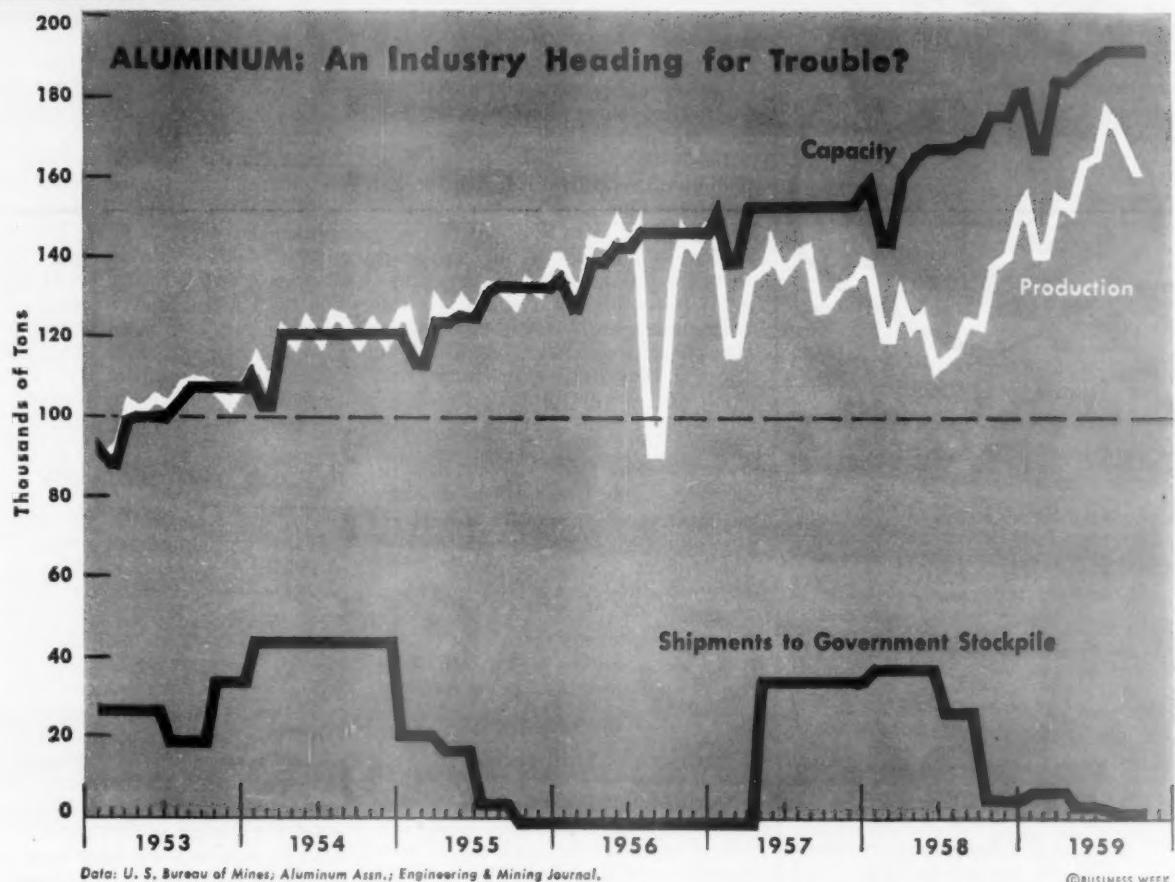
The new gas-saving Corvair is here and Hertz has it—at new low fleet-lease rates! Hertz sales-car leasing makes good sense any time. Now, with a Corvair fleet, you'll get the very maximum sales miles out of your gasoline dollar—plus the prestige of operating the newest, smartest compact car in America.

Hertz car leasing can change your fleet operation from pay-in-advance ownership—or renting salesmen's private cars by the mile—to an investment-free, pay-as-you-go leasing plan. You'll have all your costs under control. All your fleet problems are reduced to the writing of one budgetable check per month.

For further information about leasing the Corvair (or other fine cars) write us today: The Hertz Corporation, Car Leasing Division, 224 S. Wabash, Chicago 4, Illinois.

HERTZ
CAR LEASE

COMMODITIES



Bracing for a Market Push

Without stockpile buying by the government to prop the market, producers must look elsewhere for sales. Even strike-scare inventory buying didn't bring them close to capacity production, and that worries them.

Aluminum's shining hopes of a doubling of consumption every 10 years have led producers of primary metal into ambitious expansion in the last half-dozen years (chart). In two periods, 1953-55 and 1957-58, they were further buoyed by government purchases for the strategic stockpile.

Now the industry's market hopes are beginning to tarnish. The stockpile buying has ceased. The gap between operating rate and total capacity is widening even more than the chart shows. Only a few days ago, Kaiser Aluminum & Chemical Corp. cut production from 90% of capacity to 80% and Reynolds Metals Co. cut back from 91% to 80%. Aluminum Co. of America remains at 82%. The industry is bracing itself for a reappraisal of what it is and where it's going.

• **Undigested Growth**—Between its own

overoptimism and encouragement from the government's post-Korea stockpiling program, the aluminum industry has overextended itself. By the time overcapacity became evident in 1957, it was too late to stop all plant construction, and capacity continued to grow.

As the country came out of the 1958 recession, production built up to an all-time peak. Yet some new plants were put into use in the same period, and production—even with the goad of accelerated buying in mid-1959 in fear of a strike—never did catch up with capacity. Now the inventory-building has reversed, and aluminum producers are hastily cutting output.

• **Foreign Competition**—They are also fighting hard to hold their markets, particularly in the semi-fabricated mill products, such as sheet, circles, plates, rods, bars, and foil. This seems to be

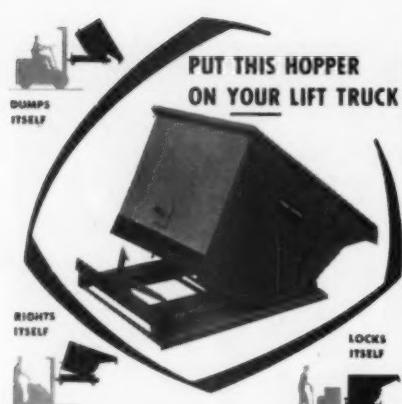
the chief battleground for foreign competition.

Imports of mill products from Europe and Japan have just about doubled in the past year—from 3% of total U.S. consumption to 6% or more. Overseas metal makes its appeal largely on price, 10%-15% less than domestic prices. Much of the overseas product comes from modern and efficient postwar mills.

There's little concern over competition in primary aluminum—pig and ingot. Not counting Canadian trade back and forth, which is closely integrated with the domestic industry, the U.S. exports about twice as much primary aluminum as it imports. But there's every indication that the overseas competition in mill products will get more serious.

"Wait until the St. Lawrence Seaway has its first full season next year," says one trade observer. "Then the aluminum business is really going to learn how hard life can be." The Seaway can bring metal to the heart of the Midwest, which ranks as the world's leading metal-fabricating area.

• **Meeting Price**—Last month, Alcoa



Cut bulk handling costs 50% or more

It's easy to cut costs with this hopper. Use it instead of a tote box for handling all kinds of wet or dry, hot or cold bulk materials. Pick it up with your lift truck . . . move it to its destination . . . flip the latch and the hopper automatically dumps its load, rights itself, locks itself. One man does the entire job in a fraction of the usual time. Roura Self-Dumping Hoppers are built of $\frac{3}{16}$ " steel plate with continuous arc-welded seams. Five sizes, $\frac{1}{2}$ to 2 yard capacity, on live or semi-live skids with choice of wheels. Standard models shipped from stock. Also available in stainless steel or galvanized.

ROURA
Self-Dumping
HOPPER

WANT DETAILS? Clip this coupon to your letterhead and mail to
ROURA IRON WORKS, INC.
1407 Woodland Ave., Detroit 11, Michigan

made a sharp cut in price of one mill product: aluminum sheet. Its new prices range from 34¢ to 40¢ a lb. for a new grade of sheet that's midway between low-priced utility sheet and high-priced specification sheet. Utility sheet had been priced about 39¢ to 47.6¢.

This competitive coup is aimed at aluminum's market in the construction industry. Other large producers are following Alcoa's price lead, but the independent rolling mills say they can't buy primary metal from the big companies at the prices that are charged and still make money on sheet at the new scale. They have repeatedly complained to Congress that the big producers who supply them with primary aluminum also compete with them in fabricated goods.

In the long run, says Alcoa, the lowering of sheet prices will be offset by the lowering of costs as the market expands and plants specialize on the new type of sheet. But the independent fabricators say they can't get either of these benefits.

Analysts estimate that, initially, the price cuts could reduce the industry's gross income by upward of \$40-million.

I. Stockpile Umbrella

Much of aluminum's growth of productive capacity—and its rise in prices—took place under the umbrella of government commitments to buy metal for the strategic stockpile. Government buying was cut sharply in the last half of 1958 (chart, page 169), and it ran out entirely this year for the Big Three. Indeed, the stockpile managers hint that they have more aluminum than they need.

In 1954, the stockpile took more than one-third of total output of pig and ingot. Even last year, \$165-million worth was sold to the stockpile in a year when the industry's combined net income was only approximately \$106-million.

As long as the government was such a good customer, the aluminum producers could demand, and get, a generous profit on primary metal. They have production costs estimated at perhaps 15¢ or 16¢. Even with ocean freight of about 1¢ a lb., they have been making money on sales abroad at 22.5¢ a lb. And U.S. customers are paying 24.7¢ a lb.

• **Expanding Output**—Seven years ago, only the Big Three—Alcoa, Kaiser, and Reynolds—produced primary aluminum. They had a combined capacity of 90,000 tons a month.

These companies, particularly Alcoa and more recently Reynolds and even Kaiser, didn't rest with producing aluminum pig and ingot. They added value to their 16¢-a-lb. primary metal by pro-

cessing it into mill products, and in some cases into finished goods for retail sale.

In the early 1950s, a few of the Big Three's customers decided that a profit might be made in primary aluminum—and, anyway, why buy it at 22¢ or 23¢ a lb. when it probably could be produced for 16¢ or even less? So the Little Four joined the Big Three in turning out pig and ingot. These new producers—Harvey Aluminum, Revere Copper & Brass, Inc., Olin Mathieson Chemical Corp., and Anaconda Co.—together own 13% of present U.S. primary aluminum capacity. That's about 25,000 tons a month of the industry's current capacity of nearly 200,000 tons a month.

II. Costly Overcapacity

Unless markets can be greatly expanded, the aluminum industry sees little chance soon of keeping this capacity profitably occupied. If the strike-scare inventory buildup didn't do it, nothing could do it in today's market, industry observers say.

The cost of not producing a pound of aluminum is high. Aluminum isn't made with a high wage cost but with a heavy investment per pound in plant and equipment. Electric power makes up a costly charge against each pound of metal produced, and a demand charge must be paid in some cases even when a plant is shut down. In addition, salaries and local taxes must be paid as in other plants.

Industry spokesmen have estimated the cost of not producing aluminum at 4¢ to 6¢ a lb. of idle capacity. So it takes close figuring to decide whether or not to shut down an aluminum line or plant.

III. Fight for Markets

The aluminum industry has made most of its headway in expanding its markets at the expense of other materials—steel, plastics (principally as a wrapping and packaging material), and wood.

The industry has long sought a broader foreign market, too, as shown by its sale of primary metal abroad at lower than U.S. prices.

The industry still talks of the foreign market potential. U.S. per capita consumption of aluminum is about 21 lb. a year, compared with 6 lb. in Canada and western Europe and 1 lb. in the rest of the world.

But the big integrated companies must still compete with each other and with their own customers, the fabricators. And they must keep an eye on big foreign producers, such as Aluminium, Ltd., a close second to Alcoa in size and a seller of more than 150,000 tons of

As a reader of **BUSINESS WEEK**, you are served by the largest world-wide network of business news reporters maintained by any magazine.



NO SUPPLEMENTARY LIGHTING—Here inside the new wing of Assembly Products, Inc., the Power Groove general lighting does all the work—without supplementary lighting—improving appearance and efficiency, reducing initial cost and operating expense.

"Our new building cost us 50¢ a square foot less—just by using new General Electric Power Groove Lamps!"

says Mr. John D. Saint-Amour, President, Assembly Products, Inc., Chesterland, Ohio

When Assembly Products, Inc., an aggressive and growing manufacturer of meter-relays, added a new wing to its plant in Chesterland, Ohio, it quickly settled on new General Electric Power Groove Lamps. Why Power Grooves? Because they got more light per lamp—so they needed fewer lamps and fixtures. They got a comfortable 250-footcandles on the work, and saved 50¢ a square foot over the next most powerful fluorescent lamp type.

In a recent letter to General Electric, Mr. John D. Saint-Amour, president of Assembly Products, said: "The Power Groove system recently installed in the new wing of our plant has already proved to be a valuable investment. In the older plant area, both general lighting and supplementary lighting were required. The gen-

eral lighting *alone* is all that's needed in our new wing. We're confident this new lighting system will result in better, faster, and more efficient production."

PLANNING NEW LIGHTING? Then find out all about the new G-E Power Groove

Lamps. They come in 4, 6 and 8-foot lengths—designed to deliver up to 15,000 lumens, and they're interchangeable with original Power Grooves. For more information, write: General Electric Co., Large Lamp Dept. C-938, Nela Park, Cleveland 12, Ohio.

SAVINGS ON INITIAL INVESTMENT BY USING G-E POWER GROOVES COMPARED TO OTHER 8-FOOT FLUORESCENTS

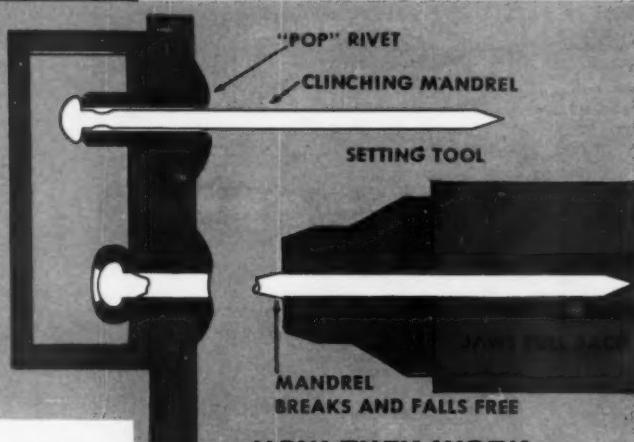
(Based on a 250-footcandle level, at about \$2.06 per square foot using Power Grooves)	SAVINGS PER FOOT	SAVINGS PER 10,000 FT.
POWER GROOVES vs. 8' HIGH OUTPUT LAMPS (at \$2.56/sq.ft.)	50¢	\$5,000
POWER GROOVES vs. 8' SLIMLINE LAMPS (at \$2.83/sq.ft.)	77¢	\$7,700

Progress Is Our Most Important Product

GENERAL  **ELECTRIC**

**5-Year
Study
Proves**

**Each
"POP" RIVET
Saves 4.9¢
on Installed Costs**



High Clinching Action
Pulls parts together with up to 600 lbs. squeeze. Eliminates need to clamp.



Wide Grip Range
Simplifies inventory, purchasing, inspection. Same length "POP" Rivet holds tight through thick or thin.



Vibration Proof
"POP" Rivets cannot back out or become loose. Ensures tight assembly for years of use.



Least Back-Up Space
Strong, high strength "POP" Rivets need only enough back-up space to provide room for set head. Gives more compact design.

HOW THEY WORK

Tool pulls mandrel head into "POP" Rivet until mandrel breaks under tension setting rivet tightly on reverse or blind side.

Saves 4.9¢ each over other blind rivets

Saves 1.8¢ each over solid rivets

Replace 100,000 solid rivets with strong, high clinch "POP" Rivets and you save \$1,800. Use 100,000 time-tested "POP" Rivets for blind assembly work and you save \$4,900.

No other rivet equals the savings potential in *installed costs* provided by "POP" Rivets. One aircraft company saved \$223,000 on one fifty-plane contract alone — and with today's rapidly increasing costs, even greater savings are possible. In addition, the extraordinary design flexibility of these rivets gives engineers many opportunities for simplified product design.

Extreme light weight, high production gun — only 2 lb., 3 oz. sharply reduces operator fatigue. Means more rivets set per hour right on the assembly line — rates as high as 1200 per hour even with unskilled operators.

Whether you make planes, missiles, cars, trucks, trailers, metal awnings, furniture, boats, or toys, you can cut costs, simplify design and add assembly convenience with "POP" Rivets. Call or write for our literature now — before you forget. Better still, send a sample assembly for riveting.

"POP"

**"POP" RIVET DIVISION
UNITED SHOE MACHINERY CORPORATION**
River Road Shelton, Conn. • Phone: REgent 5-3391

unfabricated metal to U. S. fabricators each year.

• **Sharper Competition**—Early last year, Aluminium kicked over the traces with a 2¢ a lb. cut in price of primary metal to its U. S. customers as well as customers elsewhere in the world. Until then, Aluminium had always followed the lead of U. S. producers in setting its U. S. prices.

Aluminium, too, is developing its worldwide outlook toward markets. It is opening new fabricating plants in Ghana, Nigeria, and New Zealand and is expanding its plants in the United Kingdom and in Canada.

Both to rebuild their own profit margin and to give their fabricator customers an escape from a squeeze, the U. S. producers would like to raise prices on some fabricated products. But they must keep watching Aluminium, Ltd., over their shoulder. Aluminium's sales of primary metal are chiefly to independent fabricators in the U. S. Formerly the Big Three were major buyers of its pig and ingot as well as big producers.

Alcoa has more than enough fabricating capacity (something like 1.7 times as much) to use its entire ingot output, and Reynolds and Kaiser are close to matching their ingot capacity.

• **Wage Pressure**—Even though labor costs don't represent such a high proportion of manufacturing expense as in many other industries, aluminum executives say a price increase would be inevitable if wages go up. D. H. Rhodes, president of Kaiser, said this in so many words in June.

Anaconda last May settled with the Aluminum Workers Trade Council for an 8½¢-an-hour wage increase. Fringe benefits push this cost up considerably. Contracts of major producers expired on Aug. 1, but plants have continued to operate under agreement that final settlement will be retroactive to that date. Negotiations have been hanging fire pending the outcome of steel bargaining.

• **Help From Washington?**—The industry is aware that government stockpiling saved the day for them on other occasions. Primary aluminum consumption fluctuates widely from year to year. In 1956, about 1,650,000 tons went into private channels; in 1954, less than 1-million tons and in 1958, about 1.2-million tons. In those years, stockpile purchases saved red ink. It will no longer do so.

In July, 1958, producers went to Washington for some kind of help—import quotas, higher tariff (it's now 1½¢ a lb.), export aid—but they got nowhere. They aren't optimistic about succeeding in the future. And their case isn't helped by their sales abroad at prices below their charges to U. S. customers. **END**

**Everyone
reads between
the lines**



This is a stockholder reading a financial report:

This man sees more than words, figures, and pictures. Unconsciously he is *reading between the lines* . . . looking for the subtle implications that support the claims of the company, or cast doubt upon them. He is also influenced by the character of the printing. Does it show respect for his intelligence and good taste? Whenever a company shows respect for the reader . . . that company will win respect in return. *Respectful printing must begin with a good printer.* See him early. Most likely he will prefer a Warren paper, because he will get better results — and so will you.



printing papers make a good impression

S. D. WARREN COMPANY, 89 BROAD ST., BOSTON, MASS.



You can see Washington Monument from our new lab...

There couldn't be a righter spot than Northern Virginia for your new research center, pharmaceutical plant or other light industry. It's close to the facilities of the Nation's Capital. And skill runs high among a population with an educational level 30% above the U. S. average.

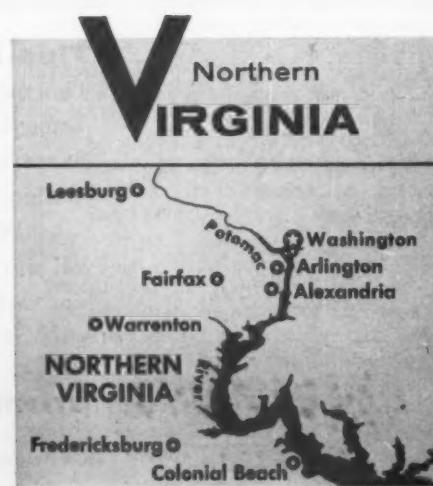
Vepco knows this area intimately. Because Vepco serves it with dependable and abundant electric power . . . 1,700,000 kilowatts of capability now, due to exceed 2,000,000 kilowatts by 1961. For more facts, or confidential site-finding help in this land of mild climate and pleasant living, write or phone today.



VIRGINIA ELECTRIC and POWER COMPANY

Serving the Top-of-the-South . . . in Virginia, West Virginia and North Carolina

Clark P. Spellman, Mgr., Area Development, Electric Bldg., Richmond 9, Va., MI 9-1411



In Management

Burnett Is President of Johns-Manville; Robert Murphy Joins Corning Glass

C. B. Burnett (picture) has been elected president and chief operating officer of Johns-Manville Corp., effective Jan. 1. His present post of executive vice-president will be abolished.

A. R. Fisher, who has been president since 1951, is giving up that office but will continue as chairman and chief executive officer. However, he will reach the company's normal retirement age of 65 next March.

Burnett, who is 51, has been with Johns-Manville since 1931. He started in production planning and later served as director of engineering and general manager of three divisions.

Other recent executive changes:

Robert D. Murphy, one of the best known of American career diplomats, was named president of Corning Glass Works International, Corning's foreign operating division. He is retiring as Under Secretary of State for Political Affairs after 39 years in the foreign service.

John H. Brinker, general manager of A. O. Smith Corp.'s Permaglas Div., who had been regarded as a likely successor to Executive Vice-Pres. F. S. Cornell, left A. O. Smith to become executive vice-president of J. I. Case Co., farm construction machinery producer.



Office Automation Rarely Leads To Lay Off of Clerical Workers

Will office automation lead to widespread layoffs of clerical workers? Some people think so, but a new study by the National Office Management Assn. has uncovered no evidence that it is happening yet.

NOMA surveyed 369 companies that are using computers and related machines to process data. Of the 219 companies that reported the effect on their personnel, only six laid off anybody at all. Nearly four-fifths of the employees involved were transferred to other departments; more than one-fifth were kept on to work with the new equipment; less than 1% were fired.

So far, less than two-fifths of the companies surveyed find that automatic data processing is saving them money. Nearly half are just breaking even on the deal. However, even the 18% whose costs are higher say it's worth the extra expense to have accurate data available fast. In fact, only 5% of the companies are not thor-

MORE NEWS ABOUT MANAGEMENT ON:

- P. 176—Businessmen advised to put ethics above economics.

oughly sold on their machines and less than 1% are thinking of going back to their old systems.

Mechanization has produced some trend to centralization of data processing, the study shows. Nearly a third of the companies have centralized the operations involved, at least partly because of the machines. However, 6% have decentralized data processing and 64% said automation had had no effect on their organization structure at all.

• • •

Canada's Massey-Ferguson Reorganizes

The management structure of Massey-Ferguson, Ltd., Canada's giant tractor and farm equipment manufacturer, was reorganized last week to conform to the company's growing international operations (BW—Aug. 1'59,p28). Instead of two divisions, Western Hemisphere and Eastern Hemisphere, there are now five—North America, United Kingdom, France, Germany, and Australia.

In addition, two new staff departments were created. The department of special operations will open new market areas, and the department of corporate marketing will centralize export operations. To emphasize the new setup, the international offices will be moved out of Massey-Ferguson's old headquarters buildings in downtown Toronto.

• • •

Management Briefs

Grants to Canadian higher education by companies and industrial foundations dropped 10% last year, to approximately \$10.4-million, the Industrial Foundation on Education in Canada reports. The proportion of the total contributed by U. S.-controlled companies rose, from 24.7% in 1957 to 30.1% in 1958.

New Ford Foundation grants totaling nearly \$2-million will go for internships to help improve the quality of government service. Among the recipients: the Board of Higher Education of the City of New York, for college student internships with federal agencies; and Citizenship Clearing House, for college faculty and student fellowships in state and local government.

The University of Texas now is allowing students with bachelors' degrees in liberal arts, engineering, and other non-business areas to enroll in its master's degree program in business administration. The university used to require an undergraduate business education for admission to the program. The idea of graduate business training for students with non-business degrees was urged in recent studies sponsored by the Ford Foundation and Carnegie Corp. of New York (BW—Oct. 31'59,p84).

Pemco, Inc.
says

BODINE MOTORS are reliable

"Our Kay-Cross Oxygenator must be of utmost reliability since it takes the place of lungs during critical surgery. We chose a Bodine Motor because of the high quality standards required" . . . Pemco, Inc.



Bodine manufactures 3500 STANDARD motors. Why spend time and money to have a special motor developed when one of these standard motors may be ideally suited for your new or improved product? Talk to Bodine.

300 different STOCK types and sizes ready for fast shipment.

BODINE
fractional / horsepower
MOTORS



the power behind the leading products

BODINE ELECTRIC CO., 2520 W. BRADLEY PL., CHICAGO 18

THE Commonwealth

GROUP OF MUTUAL FUNDS



COMMONWEALTH INVESTMENT CO.

Investing for reasonable income and possible growth of principal. A balanced fund established 1932.

COMMONWEALTH STOCK FUND

Investing in common stocks selected for their possibilities of long-term growth of principal and income.

COMMONWEALTH INCOME FUND

Investing in securities selected for current income.

Free prospectuses from your local investment dealer or:

NORTH AMERICAN SECURITIES CO.
Russ Building San Francisco 4
New York • Chicago • Los Angeles

The management pattern—

The World and the Spirit

For 20-odd years, social scientists have been nudging business into a more and more "human" approach to employee relations. They have argued for a keener recognition of the workers' needs for security, recognition, and participation in decision making. Their chief argument has been that the happy worker produces more and better.

But the basis of their attack on traditional factory discipline, orthodox authority in management, and the efforts of industrial engineers to rationalize production and wages goes beyond mere efficiency. By implication, at least, they have condemned scientific management as anti-human.

- **New Concept**—Now, a new concern within management itself seems to be shifting the whole approach to a more spiritual plane. Certain businessmen are attacking the assumptions of economics that for almost two centuries have supported the philosophy of free enterprise.

Basically, the new approach is an attempt to make business adopt the ethics of religion—specifically of Judeo-Christian morality. From this point of view, economic self-interest is simply selfish greed and egoism, and management engineering becomes downright sinful.

- **Vanguard**—Edward Bursk, editor of the Harvard Business Review, signaled the trend in a collection of HBR essays reprinted this year under the title *Business and Religion*. But the implications of the current attempts to join "human relations" and Christian theology show best in James Worthy's *Big Business and Free Men*, published this week by Harper.

Worthy, a member of the American Sociological Society, is a vice-president of Sears, Roebuck & Co. but he and Sears' Chmn. F. B. McConnell make it plain that Worthy writes as a private citizen.

Two years ago, Worthy did not claim the sanction of religion for his arguments. Today, it's impossible to question his thinking without getting involved in a religious dispute. For example, he has no doubt as to specifically what the Christian principles are that he would have preachers advocate for business decision-makers. But others might logically ask: Which preacher? In religion, as in economics, even the experts often disagree.

Worthy is no longer satisfied with behavior that is merely socially sanctioned. Moreover, he is convinced that "in the world of business there are many devout men deeply troubled and seeking greater relevance between their work and their faith."

But, just as Worthy's understanding of the Judeo-Christian tradition may differ from that of other thoughtful men, so too his appreciation of scientific management seems rather limited. He delights in linking "scientific" management to Soviet Russia, where it "has had its fullest flowering," and shows something less than charity in characterizing Frederick W. Taylor, the father of scientific management. According to Worthy, Taylor presented "a well-organized, well-adjusted front, behind which he was rigid, insecure . . . internally distressed."

- **In Politics**—Moving from economics to politics, Worthy heartily recommends liberalism as a philosophy "by and large more natural and comfortable for the modern businessman and better fitted to the needs of his role than the philosophy of conservatism." Possibly some businessmen will not agree that "it would be a great mistake if the Republican Party should ever become the party of business. . . ."

- **Skepticism**—The words that Worthy uses—*liberal, democratic, human, free*—are good words to most people. But in an economy still characterized by strong labor unions, dividend-demanding shareholders, and political uncertainty—to say nothing of sinful man—can business yet give up managerial authority, organizational discipline, and the profit motive?

It might rather be anticipated that most managers will continue to regard economics as economics, and religion as religion—making such adjustments as their consciences and the competition require.

GRACE LINE'S

SANTA PAULA

AND

SANTA ROSA



RELY ON "BUFFALO" FANS AND PUMPS

The Santa Paula and her sister ship Santa Rosa of the Grace Line were constructed by Newport News Shipbuilding and Dry Dock Co.

The Grace Line's Santa Paula and her sister ship, the Santa Rosa sail on weekly schedules from New York to the Caribbean. The 300 passengers on each ship are treated to the best. Complete air conditioning; play deck with largest outdoor swimming pool afloat; club; staterooms, all outside with private bath; balcony suites with verandas overlooking the sea; everything to guarantee passenger rest and recreation. Ports of call are Curacao, NWI; La Guaira, Venezuela; Aruba; NWI; Kingston, Jamaica; Nassau, Bahamas; and Port Everglades, Florida.

Contributing to the successful operation of each ship are 74 "Buffalo" Centrifugal Fans; 55 "Buffalo" Axial Type Fans; and 21 "Buffalo" Pumps. Engineered to give maximum performance and quiet operation with minimum maintenance, "Buffalo" Fans and Pumps have been widely used for marine service for many years. For reliable performance on your important air and liquid handling jobs, on sea or land, insist on "Buffalo" "Q" Factor* Equipment.

**The "Q" Factor — the built-in Quality which provides trouble-free satisfaction and long life.*



BUFFALO FORGE COMPANY Buffalo, New York

Buffalo Pumps Division, Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING • AIR CLEANING • AIR TEMPERING • INDUCED DRAFT • EXHAUSTING • FORCED DRAFT • COOLING • HEATING • PRESSURE BLOWING

NEW PRODUCTS

It's Biggest Year Ever For Changes in Trucks

A standpat industry tries all sorts of innovations. "Compact" trucks are expected to be the next development.

The fanfare over Detroit's venture into compact cars has all but drowned out another dramatic automotive development: the biggest ever changes in truck models.

It might even mark a new era if the changes result in increased sales. Then trucks might change even more from year to year. Changes like this year's wouldn't be considered radical for passenger cars, but for trucks, they're enormous.

Truckers as a tribe resist change; "time-tested" is an industry catch word. Just a few inches shaved off the length of a cab, or one more added forward speed, has often been heralded as constituting a new truck. "The patchwork pattern of the past," is what it's called by Philip J. Monaghan, a General Motors vice-president and general manager of the GMC truck and coach division.

GMC itself signaled the end of the patchwork this week, when it put on sale its radically changed line of trucks—with new engines, new suspensions, and new cabs. And by the end of next

year, there may be an even bigger switch, with "compact trucks" (pictures) vying for the spotlight with compact cars.

- **Figuring**—The industry assumptions behind the truck changes are much like those that brought the switch in passenger cars. They are:

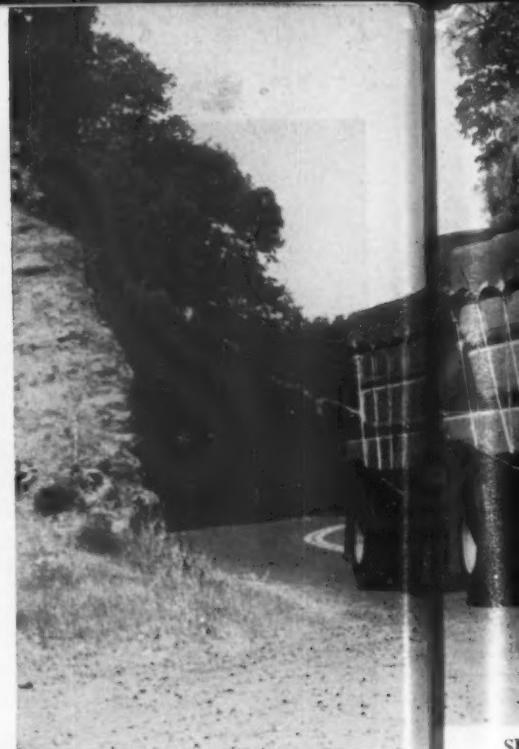
- That a substantial number of customers have been deferring purchases and need to be excited back into the market.

- That the face—or at least some of the features—of the market itself is changing.

The first assumption is based on the fact that since 1950, truck sales have never lived up to predictions based on expected rush to replace old trucks. The old trucks are still running; of 10.3-million in use, nearly 20% are in the "10 years and older" category—the highest ratio since 1953—according to Herman P. Sattler, Chevrolet's assistant general sales manager. The "five years or less" classification is the smallest since 1948. From this, Sattler deduces "a vast pool of demand, due to deferred truck buying . . . for lack of significant innovations in the truck industry."

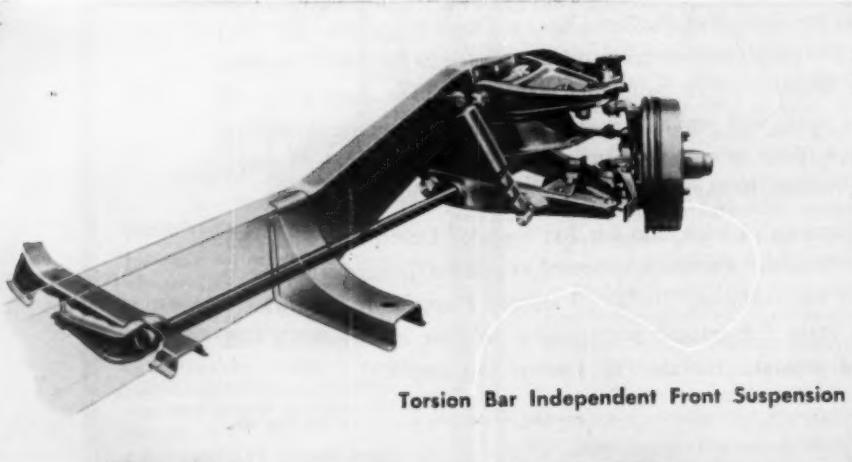
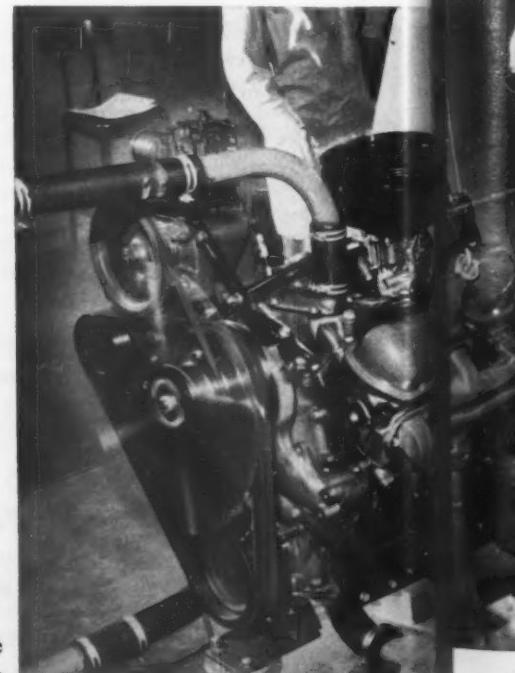
The second assumption is based on growing sales of certain types of trucks:

Imports, generally tiny jobs such as the 4,079-lb. Volkswagen (BW—Aug.



16'58, p104). The market for imports is still small, but its growth rate has startled U.S. truck makers. Four years ago, imports were negligible. This year, of an estimated 970,000 new truck registrations, 35,000 will be imports—and next year the figure should be 50,000 or more. That's why at least four U.S. truck makers are working on smaller, more economical trucks.

Giant trucks (BW—May 23'59, p168). Here the diesel seems to be the coming thing—diesel truck sales were up from 4,885 in 1949 to 22,883 last year.



Torsion Bar Independent Front Suspension

NEW SUSPENSION on GMC truck gives a smoother ride with torsion bar and independent action instead of the old leaf springs on a solid front axle.

THE V-6 ENGINE, announced earlier this year, gives GMC trucks more pulling power and longer life, along with savings in the cost of maintenance.



SLIMMER CABS feature many of the 1960 model trucks. This Diamond T tractor cab measures only 50 in. front to back.

They're projected at 35,000 this year, unless the steel strike sets things back—startling rise of over 50% in one year. • **Role of Diesels**—Diesels are also expected to play a big role in another sector—the local delivery truck market, where engines suffer from constant idling and changes of speed and gears. The same factors operate here that make diesels attractive for big trucks—economy of operation, longer wear from fewer moving parts, comparative ease of maintenance.

Sifting all the assumptions and evidence General Motors has come up with these changes in its trucks:

Suspensions. Both GMC and Chevrolet are offering what they say is the first torsion bar suspension on domestic trucks. It combines with an independent front suspension and a variety of spring rear suspensions to produce an easier ride. The conventional truck has a solid front axle with hard-riding leaf springs, which don't absorb all of a shock hitting one wheel. They trans-

mit a pronounced up-and-down bounce all through the cab. The new system confines the shock to a smaller area and disperses it into torque and side-to-side motions, instead of merely cushioning the up-and-down impact.

Cabs and frames on both GMC and Chevy have been changed to make the driver's area lower and roomier.

Engines. GMC goes further than Chevy, and its new lines of V-6 gasoline and diesel and V-12 gas engines (BW—Aug. 8 '59, p125) are intended to last



PIONEER "COMPACT" TRUCK is Studebaker's Lark station wagon, converted by fiber panels in the rear side windows. Other small trucks are expected soon, first from the Ford Falcon line, then possibly from GM.

**The case
of the Extra
Receptionist**



SOLVED! One telephone call provided this businessman with efficient, experienced temporary help for an increased work load. (No problems about payroll, records, insurance or taxes.)

For temporary help selected especially to fit your particular needs call . . .

EMPLOYERS OVERLOAD company ®

All Office Help Immediately Available
By Day . . . Week . . . Month!

**LOCATED IN
PRINCIPAL CITIES**
Executive offices
1400 Foshay Tower Bldg.
Minneapolis 2, Minn.



Yardsticks

Here's how advertisers of business goods and services evaluated general-business and news magazines in 1958:

Advertising Pages —
Business Week carried twice the total of any magazine in its field.

Number of Advertisers
Business Week carried over 200 more advertisers than any other general-business or news magazine.

Number of Exclusive Advertisers —

Business Week carried more exclusive accounts than the three leading general-business magazines combined, nearly twice the total of any management magazine.

much longer and cost less to maintain.

New engines account for the main changes in other truck lines. Diamond T, now a division of White Motor Co., has a full line of six and V-8 gasoline engines built by White's Reo Div. Dodge Truck Div. of Chrysler Corp. is offering its first diesels since the war, made by Cummins, and has larger V-8 gasoline engines. Divco-Wayne, best known as a builder of delivery trucks and small buses, has added a four-cylinder, overhead-valve engine by Continental Motors and offers Perkins and Mercedes-Benz diesels as well as its old six-cylinder job. International Harvester is making two new diesels, one for city delivery duty and the other for over-the-road service.

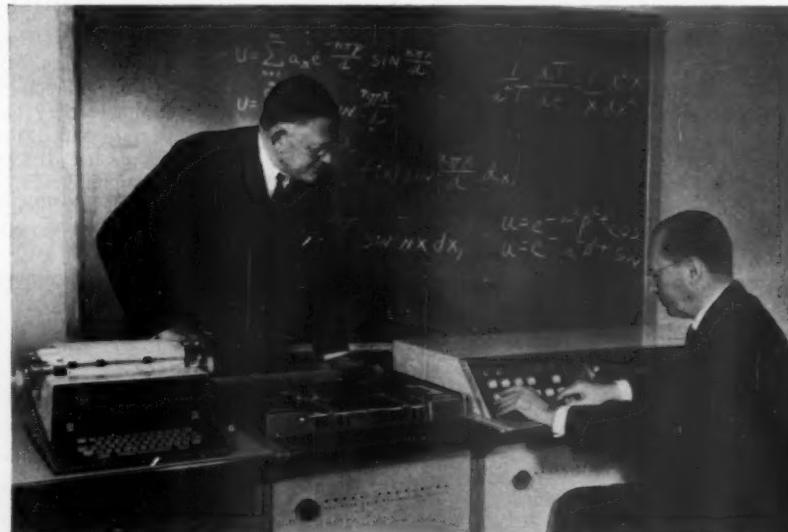
This attention to particular applications is also seen in White Motor's new Cummins diesel-powered city pickup and delivery tractor, and in a small Mack Truck diesel for similar use.

Hinged Fenders—Other innovations include Dodge Truck's "Servo-swing" fenders; hinged at the front, they swing out and expose the engine, steering and front suspension components, and new cabs. Slimmer cabs—in the 50-in. depth range—are featured by

Diamond T, White, Mack, and CMC. The use of glass fiber and aluminum for truck cabs continues to grow.

The next few months are expected to show how far "compact" trucks will go in imitation of the imports. Two years ago, International was the first domestic producer in this area with the Metromite. Now Studebaker offers a Lark station wagon converted into a panel truck by fiber inserts in the rear side windows, following a pattern started with the 1958 Scotsman.

Ford executives—whose 1960 trucks otherwise show no major changes—announced in September that their Falcon would be produced in a pickup truck body. It's now scheduled for introduction in the spring. Observers feel GM is likely to adapt Corvair and the forthcoming Buick-Oldsmobile-Pontiac small car components for use in small trucks. A Corvair station wagon has been promised if there's demand for it, and this could easily lead to a Volkswagen-type Corvair truck, perhaps for 1961 models. And the ability to produce "compact" trucks from compact car lines with small cabs for extra tooling is an incentive to all small-car manufacturers.



Royal McBee, president Zenner, watches Royal Precision president Crandall show off . . .

More Computer for Less Money

Traditionally, the computer industry's gains in speed and capacity have been matched by increased prices. Just lately, two new computers—Royal Precision Corp.'s medium-size RPC-4000 (picture) and Control Data Corp.'s 1604—are bucking the trend, using technological advances to cut prices.

Both are the solid-state computers; that is, their circuitry uses transistors and magnetic devices that need little power and take up little space compared

with vacuum tubes. Following the solid state computer trend (BW—May 30 '59, p64), they can be used in both business and scientific applications.

The older machines have always justified their rising prices on the ground that the unit cost of information processed actually went down as the machines got bigger. One catch to this was that companies with limited resources could not afford the initial cost of the machines regardless of the operat-



Military flame thrower fails to damage



Cyclone Steel Fence !

To test the fire and heat resistance of USS Cyclone Steel Fence the lethal fury of an Infantry flame thrower was turned against a panel of Cyclone Chain Link Fabric. The result? The fence fabric was completely undamaged. If this had been an actual installation the fence would have been just as serviceable, just as strong and good-looking afterward, as it had been before.

Tests like this, plus hundreds of in-use accidents, have

proven that USS Cyclone Steel Fence can stand up under all kinds of adverse conditions. Accidents that would destroy other kinds of fence have no effect on Cyclone. Doesn't this prove that Cyclone Fence would be ideal for your next plant or factory installation?

Find out more about Cyclone Fence. Just send in the convenient coupon and we'll give you complete information on all types of USS Cyclone Fence.

USS and Cyclone are registered trademarks



**Cyclone Fence Dept.
American Steel & Wire
Division of
United States Steel**

Waukegan, Illinois • Sales Offices Coast to Coast
United States Steel Export Company, Distributors Abroad

Cyclone Fence, American Steel & Wire
Dept. 4219, 614 Superior Avenue, N.W.
Cleveland 13, Ohio

Send free booklet featuring Cyclone Fence.

Name _____

Address _____

City _____ Zone _____

State _____

GET UP TO DATE ON NEW YORK STATE



Now... most complete report on water ever assembled

Since not only the quantity of water, but also its unique characteristics often determine a new plant location, the New York State Department of Commerce has compiled the most comprehensive data ever assembled on the State's water resources. This information is yours free.

Facts on flow... and more

You'll learn, for example, the rate of flow of New York's important waterways. In addition to average flow, minimum and maximum flows are shown, including flood history, in many cases covering up to 40 years. What's more, analyses are now available which give the content of iron, silica, and other minerals; also hardness, pH factor, alkalinity, temperature and other data. If you're interested in a water analysis for a specific area, a sample will be examined and a report sent to you without cost, and under strictest confidence.

Considerable data on underground water resources of New York State have been collected, too. Numerous wells all over the State provide information on water tables and fluctuations, plus chemical analyses and temperature. And the experienced yield of various aquifers or substrata can be determined from the record of wells in any general area.

Raw materials near and far

New York State has also compiled reports on all other raw materials, including (1) location, quality and quantity of minerals, forest and agricultural products in the State; (2) approximate cost of out-of-state materials laid down at specific sites in the State. If you need components or semi-processed items, we will furnish details as to specifications, costs and delivery schedules.

To get your free reports on water or raw materials—labor, sites, transportation or power—drop me a line (outlining your specific needs) at the New York State Department of Commerce, Room 652, 112 State St., Albany, N. Y. Or telephone Albany 5-7521. We'll also send you our free booklet "Industrial Location Services," which fully explains all the services we can put at your disposal.

Keith S. McHugh, Commissioner,
N. Y. State Dept. of Commerce

ing economy; this group is likely to find a special appeal in the new computers. • \$1,750 a Month—Royal Precision's RPC-4000 can be rented for \$1,750 a month or bought for \$87,500, but its performance is intended to compare with vacuum-tube machines that cost two or three times as much.

Control Data's 1604 is a large-system—a typical installation costs \$900,000—but again the maker believes it can do five times the work of vacuum-tube giants that cost twice as much. The company says its gains have been based on standardizing circuits to an unusual degree while using the most basic computer building blocks.

In the medium-size field, the RPC-4000 is capable of 4,000 operations per second and has an 8,008-word magnetic-drum memory. The drum is a truncated cone, instead of the usual cylinder, and the electronic heads that read from the memory are set in a matching cup-like arrangement. When the machine is idle, or packed for shipping, the drum backs out of the cup, drawing away from the heads. On conventional drums, each head mounting must be adjusted separately. Thus the new arrangement is easier to install or service, and there is less chance of damage or distortion from ill-positioned heads.

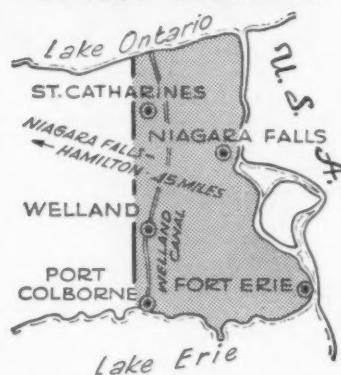
• Handicap—A possible drawback for the RPC-4000 is the relative slowness of input and output on punched-tape typewriter equipment. Its basic speed for reading paper tape is 60 characters per second; an optional photoelectric reader boosts this to 500 per second. By 1961, faster magnetic tape equipment will be available. Meanwhile, the machine can be hooked up to as many as 17-input-output devices, permitting parallel searching of tapes and so cutting the time required to ferret out a specific bit of information.

Royal Precision also makes the LGP-30 computer. The company is owned jointly by Royal McBee Corp., which markets the computers, and General Precision Equipment Corp.

• Hook-Ups—The large-scale Control Data 1604 can do about 150,000 additions per second and has a magnetic core memory for 32,768 words. Input-output equipment includes a display panel, a typewriter, paper tape, and magnetic tape units each of which can transfer 150,000 characters per second.

An unusual feature of the 1604 is that it was developed in less than two years on company money, with no assist from the government. Partly, that was possible because the company is staffed by computer veterans. Most of them originally teamed up at Electronic Research Associates, a pioneer group which was acquired by Remington Rand in 1952 and which gets credit for major work on the Univac 110 series. Now the group is on its own again. END

Ontario's FINEST CLIMATE



NIAGARA PENINSULA

Here is a pleasant climate in the heart of Canada's greatest fruit growing area, where industry is rapidly finding superior locations and facilities to reach the greatest concentration of buying power. Natural gas is available.

For full information about this and other areas contact:

Industrial Development Division

Consumers' Gas

19 Toronto St.
TORONTO, ONTARIO, CANADA

clues: To The Solution of Management Men's Problems

Published: weekly—closes 11 days in advance.

Rate—\$10.15 per line (\$5.08 per line for position wanted ads), minimum 2 lines. Allow 5 average words as line; Count 2 words for box number.

ADDRESS BOX NO. REPLIES TO: Box No.
Classified Adv. Dir. of this publication.
Send to office nearest you.
NEW YORK 36: P. O. BOX 12
CHICAGO 11: 520 N. Michigan Ave.
SAN FRANCISCO 4: 68 Post St.

POSITION WANTED

Reliable Executive Type Salesman wants good product, service or idea to sell in Metropolitan New York-New Jersey area. PW-2983, Business Week.

PLANTS & PROPERTIES

Industrial properties: Sell Lease Buy Lease back. Millions of feet coast to coast. L.S. Norry, 68 Curlew St., GL3-6783, Rochester, N.Y.

SPECIAL SERVICES

Authors Wanted by N. Y. Publisher. Manuscript ready for publication? Send for Free booklet No. 40A. Vantage Press, 120 W. 31 St., New York 1.

Attention! Direct Mail Advertisers. Envelopes stuffed & mailed, \$5.00 per thousand—We furnish mailing lists! Mail inquiries to SS-3038, Business Week.

Want office European Common Market? Less official difficulties if you are setting up your office in Germany. Well experienced German lawyer offers services. SS-2962, Business Week.

ADVERTISERS IN THIS ISSUE

Index for Business Week November 14, 1959

ALLIED CHEMICAL CORP.	162-163	FARRELL LINES, INC.	80	RAILWAY EXPRESS AGENCY	74
Agency—Benton & Bowles, Inc.		Agency—J. Walter Thompson Co.		Agency—Benton & Bowles, Inc.	
ALUMINUM CO. OF AMERICA	133	FINNELL SYSTEM, INC.	5	REMINGTON RAND, DIV. OF SPERRY RAND CORP.	85
Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Johnson, Read & Co., Inc.		Agency—Gardner Adv. Co., Inc.	
AMCHEM PRODUCTS, INC.	101	FORD MOTOR CO.	16-17	ROCKWELL MFG. CO.	96
Agency—Al Paul Lefton Co., Inc.		Agency—J. Walter Thompson Co.		Agency—Marsteller, Rickard, Gebhardt & Reed, Inc.	
AMERICAN APPRAISAL CO.	46	FUJI BANK, LTD.	134	JOHN A. ROEBLING'S SONS CORP.	106
Agency—The Buchen Co.		Agency—Advertising House, Inc.		Agency—Hazard Adv. Co., Inc.	
AMERICAN CYANAMID CO.	95	FULLER CO.	159	ROHM & HAAS CO., (PLASTICS DIV.)	43
Agency—Ben Cynamid, Inc.		Agency—O. S. Tyson & Co., Inc.		Agency—Arndt, Preston, Chapin, Lamb & Keen, Inc.	
AMERICAN FELT CO.	100	GARDNER-DENVER CO.	7	ROTARY LIFT CO.	139
Agency—Kelly, Nelson Inc.		Agency—The Buchen Co.		Agency—Greenlaw & Rush, Inc.	
AMERICAN GELOSE ELECTRONICS, INC.	52	GATES RUBBER CO.	53	ROURA IRON WORKS	170
Agency—Byrd, Richard & Pound		Agency—Harold Walter Clark, Inc.		Agency—Marsteller, Rickard, Gebhardt & Reed, Inc.	
AMERICAN MUTUAL LIABILITY INSURANCE CO.	35	GENERAL ELECTRIC CO.	14-15	ROYAL METAL MFG. CO.	24
Agency—Compton Adv. Inc.		Agency—G. M. Basford Co.		Agency—Anderson & Calms, Inc.	
AMERICAN TELEPHONE & TELEGRAPH CO.	3	GENERAL ELECTRIC CO. (LAMP DEPT.)	171	JOSEPH T. RYERSON & SON, INC.	18
Agency—N. W. Ayer & Son, Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—The Buchen Co.	
AMERICAN VISCOS CORP.	80-81	GENERAL FIREPROOFING CO.	119	SAN JOSE CHAMBER OF COMMERCE	140
Agency—Arndt, Preston, Chapin, Lamb & Keen, Inc.		Agency—The Griswold-Eshleman Co.		Agency—Long Adv. Inc.	
THE BASSICK CO.	110	GENERAL MOTORS CORP. (CHEVROLET MOTOR DIV.)	164	SHAW-BARTON	138
Agency—James Thomas Chirurg Co., Inc.		Agency—Campbell-Ewald Co.		Agency—Bayless-Kerr Co.	
BELL & GOSETT CO.	135	THE B. F. GOODRICH CHEMICAL CO. 4th Cover		SHERATON CORP. OF AMERICA	3rd Cover
Agency—Perrin-Paus Co.		Agency—The Griswold-Eshleman Co.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
CHARLES BESELER CO.	114	GOODYEAR TIRE & RUBBER CO., INC. (CHEMICAL DIV.)	2nd Cover	STEELCASE, INC.	79
Agency—Kamens Assoc., Inc.		Agency—Kudner Agency, Inc.		Agency—Aves, Shaw & Ring, Inc.	
BODINE ELECTRIC CO.	176	W. R. GRACE & CO.	65	STROMBERG-CARLSON	84
Agency—The Fensholt Adv. Agency, Inc.		Agency—Kelly, Nelson Inc.		Agency—The Rumrill Co., Inc.	
THE BUDD CO.	10-11	W. R. GRACE & CO. (POLYMER CHEMICALS DIV.)	64	S. G. TAYLOR CHAIN CO., INC.	134
Agency—Lewis & Gilman, Inc.		Agency—Charles W. Hori Co., Inc.		Agency—Jones & Taylor, Inc.	
BUFFALO FORGE CO.	177	GULF OIL CORP.	22-23	TELETYPE CORP.	154
Agency—Melvin F. Hall Adv. Agency, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Marsteller, Rickard, Gebhardt & Reed, Inc.	
BURROUGHS CORP., ELECTRODATA DIV.	130-131	HALOID XEROX INC.	152	TENNESSEE GAS TRANSMISSION CO.	103
Agency—Carson, Roberts, Inc.		Agency—Hutchins Adv. Co., Inc.		Agency—Reach, McClinton & Co., Inc.	
BUSINESS WEEK	161	HARTFORD STEAM BOILER INSPECTION & INSURANCE CO.	4	TEXACO INC.	44
Agency—The Alkin-Kynett Co., Inc.		Agency—Wm. B. Remington, Inc.		Agency—G. M. Basford Co.	
J. I. CASE CO.	78	HERTZ CORP., CAR LEASE DIV.	168	TOWMOTOR CORP.	72-73
Agency—Andrews Agency Inc.		Agency—Needham, Louis & Brorby, Inc.		Agency—Howard Swink Advertising Agency, Inc.	
CELANESE CORP. OF AMERICA	8-9, 167	HOOKER CHEMICAL CORP.	146	TRAILMOBILE INC.	132
Agency—Ellington & Co., Inc.		Agency—The Rumrill Co., Inc.		Agency—Farson, Huff & Northlich, Inc.	
THE CHASE MANHATTAN BANK	122	INTERNATIONAL PAPER CO.	51	27th EXPOSITION OF CHEMICAL INDUSTRIES	134
Agency—Kenyon & Eckhardt, Inc.		Agency—Ogilvy, Benson & Mather, Inc.		Agency—O. S. Tyson & Co., Inc.	
CHESAPEAKE & OHIO RAILWAY	127	INTERSTATE MOTOR FREIGHT SYSTEM	99	UNION PACIFIC RAILROAD	86
Agency—Meldrum & Fewsmit, Inc.		Agency—Aves, Shaw & Ring, Inc.		Agency—The Caples Co.	
CHRYSLER CORP., AIRTEMP DIV.	157	IRISH INDUSTRIAL DEV. AUTHORITY	66	UNITED SHOE MACHINERY CORP.	172
Agency—Grant, Adv. Inc.		Agency—The Caples Co.		Agency—Sutherland-Abbott	
C.I.T. CORP.	70	JOHNS-MANVILLE CORP.	71	U. S. STEEL CORP.	123
Agency—Fuller & Smith & Ross Inc.		Agency—J. Walter Thompson Co.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
CLUES (CLASSIFIED ADVERTISING)	182	JONES & LAMSON MACHINE CO.	39	VIKING PUMP CO.	63
Agency—Lennen & Newell, Inc.		Agency—Henry A. Loudon Adv., Inc.		Agency—Weale Day & Co.	
CONSUMERS' GAS	182	KEystone STEEL & WIRE CO.	102	VIRGINIA ELECTRIC & POWER CO.	174
Agency—Walsh Adv. Co., Ltd.		Agency—Thomson Adv., Inc.		Agency—Cargill, Wilson & Acree, Inc.	
CORDS, LTD. DIV., ESSEX WIRE CORP.	138	KNOWLTON BROS. INC.	110	S. D. WARREN CO.	173
Agency—Lincoln J. Carter		Agency—Barlow Adv., Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
CUNNINGHAM & WALSH, INC.	114	LOCKHEED AIRCRAFT CORP.	50-51	WEN PRODUCTS, INC.	114
Agency—Cunningham & Walsh, Inc.		Agency—Foot, Cone & Belding		Agency—Burton Browne Adv.	
CYCLONE FENCE DEPT., AMER. STEEL AND WIRE DIV., UNITED STATES STEEL	181	LUMMUS CO.	82		
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—G. M. Basford Co.			
DEJUR-AMSCO CORP.	100	MARSHALL & STEVENS, INC.	158		
Agency—Friend, Reba Adv., Inc.		Agency—Gerth, Brown, Clark & Elkus of Los Angeles, Inc.			
DELTA AIR LINES	138	MCGRAW-HILL PUBLISHING CO., INC.	136-137		
Agency—Burke Dowling Adams, Inc.		Agency—McKesson & Robbins, Inc.	21		
DEVILBISS CO.	68-69	Agency—Kenyon & Eckhardt, Inc.			
Agency—Brooke, Smith, French & Dorrance, Inc.		MINNESOTA MINING & MFG. CO.	104-105		
A. B. DICK CO.	47	Agency—Batten, Barton, Durstine & Osborn, Inc.			
Agency—Fuller & Smith & Ross, Inc.		MINNESOTA MINING & MFG. CO.	88		
DOUGLAS-GUARDIAN WAREHOUSE CORP.	98	Agency—Erwin Wasey, Ruthrauff & Ryan, Inc.			
Agency—Merrill Anderson Co., Inc.		MORTON SALT CO.	142		
DOW CHEMICAL CO.	112-113	Agency—Needham, Louis & Brorby, Inc.			
Agency—MacManus, John & Adams, Inc.		NATIONAL MALLEABLE & STEEL CASTINGS CO.	97		
DRAGO CORP.	89	Agency—Paine & Patterson, Inc.			
Agency—Ketchum, MacLeod & Grove, Inc.		NATIONAL STARCH & CHEMICAL CORP.	87		
E. I. DU PONT DE NEMOURS & CO.	121	Agency—G. M. Basford Co.			
Agency—Batten, Barton, Durstine & Osborn, Inc.		NATIONAL STEEL CORP.	82		
EASTMAN KODAK CO.	12-13	Agency—Campbell-Ewald Co.			
Agency—J. Walter Thompson Co.		NATIONAL SUPPLY CO.	90		
EDMONT MFG. CO.	98	Agency—Ketchum, MacLeod & Grove, Inc.			
Agency—Maurice Mullay, Inc.		N. Y. STATE DEPT. OF COMMERCE	182		
EMERY AIR FREIGHT CORP.	111	Agency—Batten, Barton, Durstine & Osborn, Inc.			
Agency—J. M. Mathes, Inc.		NORTH AMERICAN SECURITIES CO.	178		
EMPLOYERS OVERLOAD CO.	180	Agency—Albert Frank-Guenther Law, Inc.			
Agency—Saul Wernick, Inc.		NORTHROP CORP.	46		
ENJAY CO., INC.	124	Agency—Erwin Wasey, Ruthrauff & Ryan, Inc.			
Agency—McCann-Erickson, Inc.		PACKARD BELL ELECTRONICS CORP.	87		
EUCLID DIV., GENERAL MOTORS CORP.	125	Agency—Robinson, Jenson, Fenwick & Haynes, Inc.			
Agency—Richard T. Brandt, Inc.		PHOTORAPID CORP.	120		
EVANS PRODUCTS CO.	91-94	Agency—Wade Adv., Inc.			
Agency—J. Walter Thompson Co.		PITTSBURGH COKE & CHEMICAL CO.	141		
EXIDE INDUSTRIAL DIV.—THE ELECTRIC STORE & BATTERY CO.	149	Agency—Erwin Wasey, Ruthrauff & Ryan, Inc.			
Agency—Gray & Rogers		PITTSBURGH CORNING CORP.	55-56		
THE FAFNIR BEARING CO.	117	Agency—Ketchum, MacLeod & Grove, Inc.			
Agency—Noyes & Co.		RADIO CORP. OF AMERICA (INDUSTRIAL ELECTRONICS PRODS.)	145		
		Agency—Lefton Co., Inc.			

ADVERTISING SALES STAFF

Midwestern Advertising Sales Manager
John P. Taylor—Chicago

Eastern Advertising Sales Manager
C. C. Randolph—New York

Atlanta 3... Douglas C. Billian, 134 Peachtree St., N. W. Jackson 3-6951
Boston 16... Kent Sanger, Park Square Bldg., Hubbard 2-7160
Chicago 11... Herbert M. Higgins, William F. Holzman, James McShane, Robert Edler, 820 N. Michigan Ave., Mohawk 4-5900
Cleveland 13... William C. Bradford, John G. Cashin, 55 Public Square, Superior 1-7000
Dallas 2... Gordon L. Jones, Vaughn Bldgs., Riverside 7-5117
Denver 2... John W. Patten, Mile High Center, 1740 Broadway, Alpine 5-2881
Detroit 2... Robert G. Gould, Richard J. McGurk, Penobscot Bldg., Woodward 2-1790
Los Angeles 17... Alfred L. Blessing, 1125 West Sixth St., Huntley 2-5450
New York 36... Harold E. Choate, Fred R. Emerson, John H. Glover, John F. Jurischek, Francis P. McAdams, Bruce A. McNaughton, Al T. Ortis, John H. Stevens, 500 5th Ave., Oxford 5-5959
Philadelphia 3... R. Bernard Alexander, James T. Haupil, Six Penn Center Plaza, Locust 6-4350
Pittsburgh 22... John R. Thomas, Oliver Bldgs., Express 1-1314
St. Louis 8... John F. Roemer, Continental Bldg., 3615 Olive St., Jefferson 5-6967
San Francisco 2... John W. Otterton, 68 Post St., Douglas 2-4900
London ... Edward E. Schirmer, McGraw-Hill House, 86 Farrington St., London E. C. 4
Frankfurt... M. R. Reynal, 85 Westendstrasse, Frankfurt-M. Germany

TV Quiz: What Does E-t-h-i-c-s Spell?

In retrospect, television's crisis (page 34) seems to have much of the inevitability and poetic justice of ancient Greek drama—qualities that so often have been lacking in the programs it aired.

It is now clear both to outsiders and to the industry that the seeds of TV's disaster were sown long ago in the programs that it carried and in much of the advertising that supported them. The quiz scandals simply triggered a long overdue house-cleaning in this towering structure that the electronics age has built.

The question now is how that cleanup should proceed. And the first answer that emerges is this: If television is ever to be more than a giant advertising throwaway, it must make a much sharper separation of what might be called its editorial content from its advertising.

How such a goal is to be achieved is not entirely clear at this early stage. But for the health of TV, not only as an influential part of American culture but also as a profitable and growing business, the industry must find an answer.

By nature, of course, TV is a medium in which advertisers are likely to become intensely involved with programming and content. Laying out big money for a short one-half or one-hour program in just one small segment of viewing time in the day or week, advertisers are keenly interested in how much audience they reach. This creates an understandable pressure on the networks to schedule the material that will prove most popular, rather than what is best for all around programming.

But the fact that this temptation exists is no excuse for succumbing to it. The pressure to gain audience appeal gives no license for networks to ignore their responsibility to the public.

The industry obviously is taking the quiz scandals seriously. In their testimony before the Congressional committee that took the lid off the scandals, both NBC Pres. Robert E. Kintner and Dr. Frank Stanton, CBS president, recognized the evils of the past in TV, and suggested remedies.

Stanton's approach, which he had made public earlier, is that networks should take full responsibility for cleaning up all unsavory practices. On the whole, this seems more effective than simply passing a specific law making quiz cheating a federal offense, as Kintner suggested. Upgrading the standards of the industry as a whole, rather than closing a single crack in the picture tube, is needed.

This is not to say that the Federal Communications Commission and the Federal Trade Commission should shirk their duty to prod broadcasters under the authority they have. Nor is it to ignore the fact that the ultimate pressure for honesty and ethical conduct must come from the public. One of

the most shocking things about the whole quiz mess, in fact, is the number of people who even yet see no real harm in it.

But the responsibility for devising real cleanup measures and putting them into effect lies with the industry itself. TV, as an industry, is still quite young. It has not yet established the operating rules or the written and unwritten codes of conduct that it needs to meet its public obligation. In effect, it must learn the lesson that the newspapers and magazines had to learn in their early days—to put the public's interest first no matter what the advertiser wants, and to convince the advertiser that in the long run this serves his best interests, too.

The standards that TV sets for itself must go beyond merely legal or ordinarily acceptable ethics. They must recognize that the shameful performance of the quiz shows is intolerable under any circumstances. And they must take account of TV's duty as a licensee of what Congress has declared to be public property—the airwaves.

The current scandal is a clear warning to the broadcast industry to do some real soul-searching and to advertisers to understand that TV belongs, first, to the public—and only second to their commercial interests.

Last Chance

The Supreme Court's decision upholding a Taft-Hartley injunction in steel does not settle the strike, but it does draw the issue clearly for management and labor to see. Either the industry and the United Steelworkers will reach a voluntary agreement by collective bargaining in the next 80 days or they will have some sort of settlement imposed upon them under a new law that Congress will write when it comes back to Washington in January.

After the suffering that the strike has caused and the damage to the whole economy, it is inconceivable that Congress will let the industry close down again when the injunction has run its time. Indeed, the Eisenhower Administration has already indicated that if there is no settlement, it will present a program of its own at the new session.

The Supreme Court's decision in the injunction case makes it clear that Congress has the constitutional right to intervene when great strikes menace the economy. And the mood of the country makes it equally plain that Congress will use as much of that power as necessary to keep the steel mills from shutting down again.

The days between now and Jan. 26 are not, then, just a cooling-off period. They are literally the last chance that steel management and labor will get to settle their differences for themselves.

A NEW NAME IN NEW ORLEANS **SHERATON**



NOW IT'S THE
SHERATON-CHARLES

NEW ORLEANS' FABLED CHARM plus the famous Sheraton welcome now await you here — just steps from the French Quarter. Relax in the hurried elegance of the Café de Paris, or in the Diners' Club card honored for all hotel services.

Polynesian glamor of the Outrigger Lounge. Sheraton, an old friend of New Orleans, is proud of its new association with this celebrated hotel. Air conditioned. TV in every room. A bientôt.

Sheraton Corporation shares are listed on the New York Stock Exchange



the proudest
name in
HOTELS

For Reservations
by Mail, New
4-Second
Reservation or
Direct-Line Teletype
call your nearest
Sheraton Hotel

EAST

NEW YORK
Park-Sheraton
Sheraton-East
(The Ambassador)
Sheraton-Atlantic
Sheraton-Russell
BOSTON
Sheraton Plaza
WASHINGTON
Sheraton Carlton
Sheraton Park
PITTSBURGH
Penn Sheraton
BALTIMORE
Sheraton Belvedere
PHILADELPHIA
Sheraton Hotel
PROVIDENCE
Sheraton-Biltmore
SPRINGFIELD, Mass.
Sheraton-Kimball
ALBANY
Sheraton-Ten Eyck
ROCHESTER
Sheraton Hotel
BUFFALO
Sheraton Hotel
SYRACUSE
Sheraton Syracuse Inn
BINGHAMTON, N.Y.
Sheraton Inn

MIDWEST

CHICAGO
Sheraton-Blackstone
Sheraton Towers
Detroit
Sheraton-Cadillac
CLEVELAND
Sheraton-Cleveland
CINCINNATI
Sheraton-Gibson
ST. LOUIS
Sheraton-Jefferson
OMAHA
Sheraton-Fontenelle
AKRON
Sheraton Hotel
INDIANAPOLIS
Sheraton Lincoln
FRENCH LICK, Ind.
French Lick Sheraton
RAPID CITY, S.D.
Sheraton Johnson
SIOUX CITY, Iowa
Sheraton-Martin
Sheraton-Warrior
SIOUX FALLS, S.D.
Sheraton-Carpenter
CEDAR RAPIDS, Iowa
Sheraton-Monroe

SOUTH

LOUISVILLE
Sheraton Hotel
The Watterson
DALLAS
Sheraton-Dallas
NEW ORLEANS
Sheraton-Charles
MOBILE, Alabama
The Battle House

WEST COAST

SAN FRANCISCO
Sheraton Palace
LOS ANGELES
Sheraton-West
(formerly the
Sheraton-Town House)
PASADENA
Huntington-Sheraton
PORTLAND, Oregon
Sheraton-Portland Hotel

HAWAII

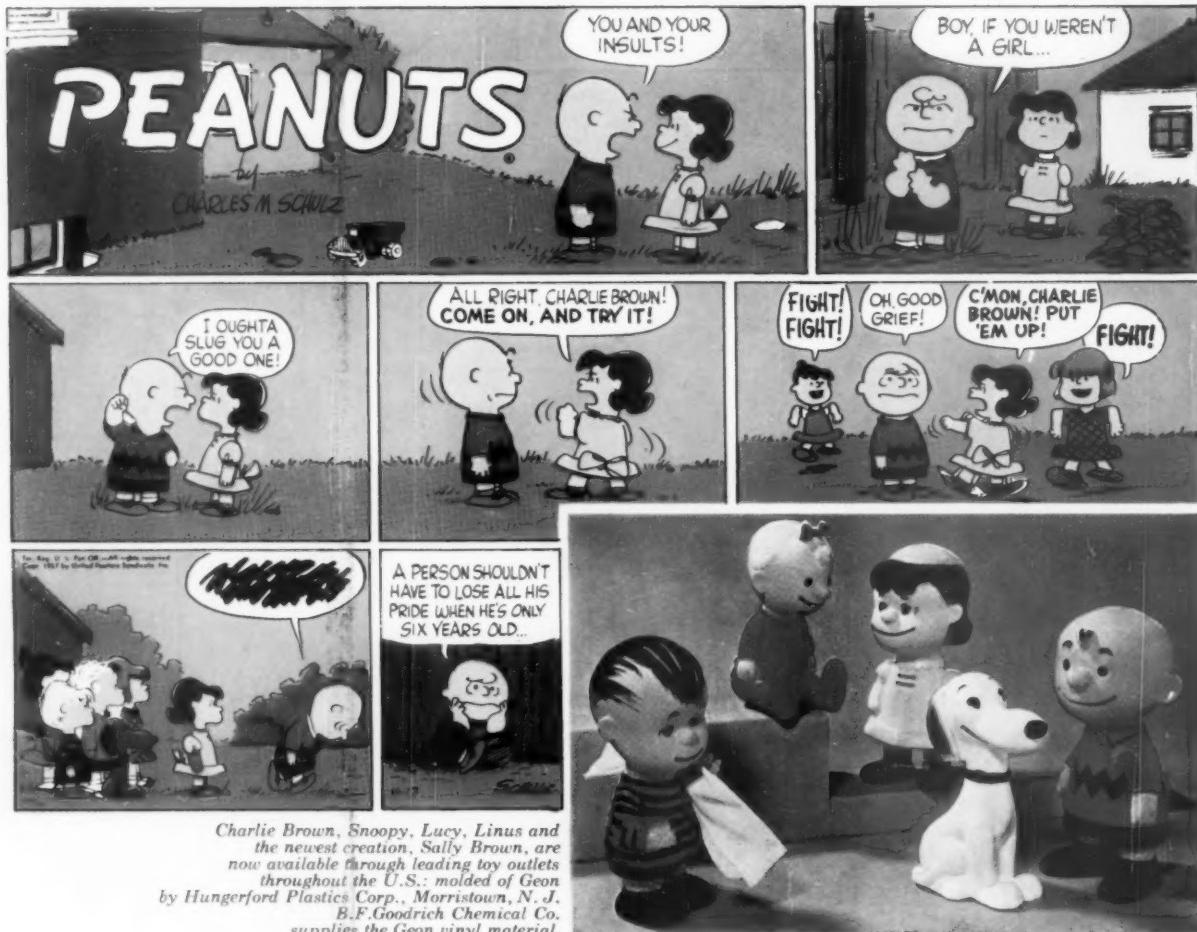
HONOLULU
Royal Hawaiian
Princess Kaiulani
Moana
Surfrider

CANADA

MONTREAL
Sheraton-Mt. Royal
The Laurentian
TORONTO
King Edward Sheraton
NIAGARA FALLS, Ont.
Sheraton-Brock
HAMILTON, Ont.
Sheraton-Connaught

Another new development using

B.F.Goodrich Chemical raw materials



Charlie Brown, Snoopy, Lucy, Linus and the newest creation, Sally Brown, are now available through leading toy outlets throughout the U.S.: molded of Geon by Hungerford Plastics Corp., Morristown, N. J. B.F.Goodrich Chemical Co. supplies the Geon vinyl material.

Toys prove there's profit in "Peanuts".

CARTOON COMES TO LIFE IN GEON VINYL

Booming sales. Borrowing on the popularity of cartoon characters pays off. These life-like versions of Good Ol' Charlie Brown and his friends show how realistic dolls can be created from Geon vinyl material.

Precision molding of toys and other products is a natural application for versatile Geon. Details are easy to produce—right down to the last, wistful flicker of expression on the face of Snoopy the dog. Toys are

soft, resilient, yet unbreakable because they are made of Geon. Bright colors spray-applied after molding are non-toxic and permanent—they are compounded of Geon too.

Geon is often the answer to a new or improved product or application. You can get more information on the many forms of Geon vinyl material by writing Dept. AA-10, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15,

Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



B.F.Goodrich Chemical Company
a division of The B.F.Goodrich Company

B.F.Goodrich

GEON polyvinyl materials • HYCAR rubber and latex • GOOD-RITE chemicals and plasticizers

